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DIGITAL DESIGN CONTEST

See Page 41

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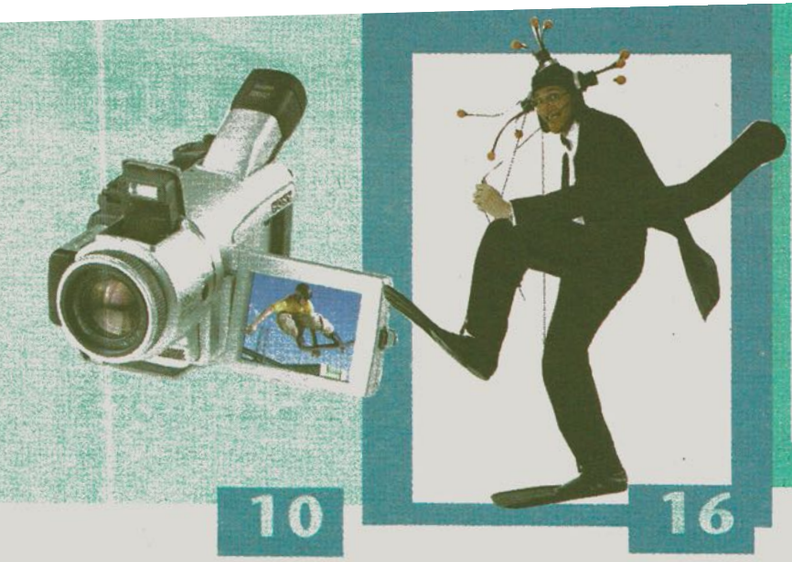

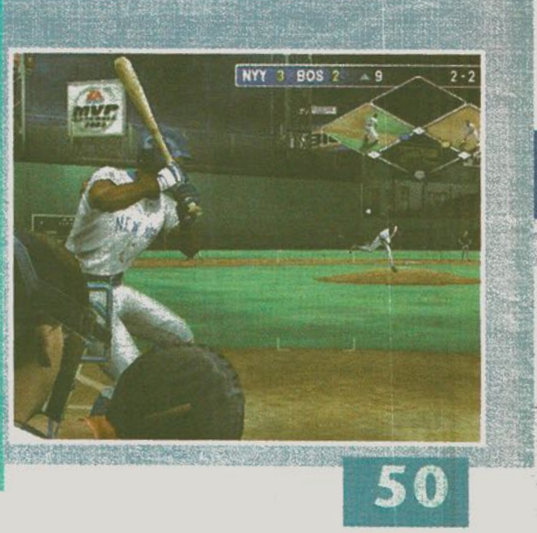

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LG 52x24x52 CDRW	$64.9
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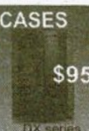

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From the editor

I was walking along a street one evening when a sight caught my eye. It was a cardboard box containing some refuse, and it had somehow broken open, spilling its contents into the street. Not intending to stop, I sauntered by the mess, but some shiny things caught my eye. There were floppy disks, CDs, and a smattering of Zip disks. This really drew my attention. I found myself drawn down and I started to examine these disks.

The Zip disks interested me, as I use these for backup and to transfer large files between my home and office. I grabbed them. The CDs were a motley collection of used CDs that were burned with God knows what. I ignored these. The only other gem from this pile – I really did not go far, for hygiene reasons – was a still shrink-wrapped copy of IBM's PC DOS 4.00. Nostalgia.

I looked around to see what business would have discarded this stuff. There were several diverse businesses in the facing office block – a medical centre, lawyers, accountants among others.

When I got home and looked closely at the Zip disks I realized that they were the backup disks for the company. Each disk contained a single file. Were these medical files, financial records, legal files or something else equally sensitive? I just formatted all the disks without prying, realizing that I had no business having this information, whatever it was.

With sensitive information being hijacked, whether from databases being hacked or hard disks walking out of the offices of financial institutions, it is a wonder that people are still so cavalier with data they accumulate. I would like to think that the Zip disks I found contained nothing more sensitive than sales orders from 1998, but who knows? And what was on those CDs that I left on the pile? We are all responsible, whether in our personal or professional lives, for the information we accumulate and just like we should recycle and not litter with garbage we should also dispose of information in a proper way – rendering the information on the disks inaccessible before disposing of them in an environmentally friendly way.

Toronto Computes! is going through a metamorphosis. *TC!* started as a computer publication nearly 20 years ago, and we have tracked the way computers literally changed the way we live. Just as the computer has grown beyond its plain beige box, so too *TC!* will shed some of its identity. For some time now we have been writing not just about the computer itself but how our lives are being intertwined with emerging technology. The changes to our publication will be huge – for one thing the new name will be *Hub: Digital Living*. The great content that you have come to rely on will be maintained and enhanced. I encourage readers to write to me with their comments and suggestions.

Nestor Gula can be reached by e-mailing nestor@tcp.ca ◆

Reader Feedback

Superior option to scanning?

Re: How To: Scan Prints to Archive – *TC!* April – I find it amazing that whenever an article of this sort is written, that the least expensive and, IMHO, the best solution is never mentioned. Use your digital camera.

To make life simpler, I use an old copy stand that has the arms out to the side to hold four photo blue bulbs. The bulbs have a relatively short life, 25 hours or so, but they only cost about $6, so it's not a big expense when they need replacing. The camera is attached to the stand via the threaded hole in the camera body. I output a video signal from my CoolPix 995 and view the image on a separate monitor. By moving the camera up or down, or by zooming in or out, I can easily get the image I want. Once I'm happy, I press the shutter and go to the next image. I believe this is a far superior option to any sort of scanning.

Alf Bristow

$30 million dollar backlog

Re: Media levy: Hearings end, saga continues, *TC!* April – Frank Lenk says in his article that companies can register with the CPCC for a rebate of the media levy. Is it possible for individuals to register and request a yearly rebate? I wouldn't mind filing an annual report for the CDs I've purchased for storing my scanned photos in order to justify a rebate. I also wouldn't mind, a month after filing a rebate request and not receiving it, taking the issue to small claims court. If a few hundred (or a few thousand) users did this, the CPCC might find that their $30 million dollar backlog was evaporating.

David Brown

Well aged response

Re: A question of options *TC!* April – Ye, verily Mara Gulens, thou art an ageist; forsooth and for shame.

"Grandma can't do much with a photo CD," you say? You obviously haven't met some of the grandmas I have.

Grandma in this house regularly edges me away from the computer to go online, to do a variety of other computer-based tasks, or to play games with her grandson. In fact, grandma bought the first PC in this house.

Prior to retirement – the only grandma in her department – she was the most computer literate of the bunch.

Grandmas everywhere deserve a well phrased, deeply felt apology and better treatment in the future.

"Grandpa Bill"
Bill Bryson

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tcletters@tcp.ca

Letters on issues raised in the paper or general computer topics are welcome. Please be brief. We regret that we are unable to look up stories from past issues, suggest products, or solve all your computer problems. All correspondence must include your full name in addition to your e-mail or snail-mail address. Letters may be edited for space or content.

Letter of the Month

For his letter this month, Bill Bryson wins a copy of *Age of Mythology*, from Ensemble Studios and Microsoft Game Studios.

Age of Mythology has players to taking control of nine legendary civilizations such as Greek, Norse and Egyptian, and allows them to do battle against other civilizations using troops and ancient creatures from each civilization's mythology.

Toronto computes!

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- ☑ **5 Years Labour & 1 Year Parts Warranty**

AMD Duron 1.3-GHz	**$739.99**	**or $27/mth**
AMD Athlon XP-2000+	**$779.99**	**or $29/mth**
AMD Athlon XP-2100+	**$799.99**	**or $30/mth**
AMD Athlon XP-2200+	**$804.99**	**or $30/mth**
AMD Athlon XP-2400+	**$839.99**	**or $31/mth**
AMD Athlon XP-2500+	**$874.99**	**or $32/mth**
AMD Athlon XP-2800+	**$1029.99**	**or $38/mth**
Intel Celeron-1.7GHz	**$754.99**	**or $28/mth**
Intel Celeron-1.8GHz	**$779.99**	**or $29/mth**
Intel Celeron-2.0GHz	**$799.99**	**or $30/mth**
Intel Celeron-2.1GHz	**$809.99**	**or $30/mth**
Intel Celeron-2.2GHz	**$829.99**	**or $31/mth**
Intel Pentium 4-1.7GHz	**$859.99**	**or $32/mth**
Intel Pentium 4-1.8GHz	**$874.99**	**or $32/mth**
Intel Pentium 4-2.4B-512k	**$909.99**	**or $34/mth**
Intel Pentium 4-2.5B-512k	**$949.99**	**or $35/mth**
Intel Pentium 4-2.6B-512k	**$1004.99**	**or $36/mth**

PREMIER CHOICE SILVER

- ☑ Abit KD7 Motherboard for AMD Socket A or Abit BH7 Motherboard for Intel Pentium 4 CPUs
- ☑ Thermaltake Volcano 6CU+ Heat Sink/Fan for AMD CPU
- ☑ Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- ☑ 60Gb Fast ATA-100 Hard Disk Drive @ 7200RPM
- ☑ 256Mb DDR RAM, PC2700, 184Pin RAM Memory
- ☑ Premium 6 Bay Mid-Tower ATX Case w/ HEC 300W P.S.
- ☑ 4- USB Ports, 2- 16550 Serial Ports, 1 PS/2 Mouse Port & 1- Bi-Directional Parallel Port
- ☑ ATI Radeon 9100 AGP Video w/ 64Mb & TV-Out
- ☑ Samsung DVD/CD-RW Combo Drive (48/24/48/16)
- ☑ On-board PCI Stereo Sound w/ Surround Sound
- ☑ Altec Lansing AVS500 w/ 4 Speakers & Subwoofer
- ☑ Rockwell 56K Int. Voice/Fax/Modem v.90 (PCI)
- ☑ On-Board 10/100 PCI Full Duplex Network Adapter
- ☑ Samsung 753DF 17" Digital .20hdp CRT Monitor, Flat
- ☑ Mitsumi 104 Enhanced Soft-Touch Win 95 Keyboard
- ☑ Logitech Optical Mouse w/ Wheel w/ Mouse Pad
- ☑ MS Windows XP Home OEM w/ CD and Manual
- ☑ **5 Years Labour & 1 Year Parts Warranty**

AMD Duron 1.3-GHz	**$1114.99**	**or $41/mth**
AMD Athlon XP-2000+	**$1154.99**	**or $42/mth**
AMD Athlon XP-2100+	**$1174.99**	**or $43/mth**
AMD Athlon XP-2200+	**$1179.99**	**or $43/mth**
AMD Athlon XP-2400+	**$1214.99**	**or $45/mth**
AMD Athlon XP-2500+	**$1249.99**	**or $46/mth**
AMD Athlon XP-2800+	**$1404.99**	**or $52/mth**
AMD Athlon XP-3000+	**$1539.99**	**or $51/mth**
Intel Celeron-1.7GHz	**$1129.99**	**or $42/mth**
Intel Celeron-2.0GHz	**$1174.99**	**or $43/mth**
Intel Celeron-2.2GHz	**$1204.99**	**or $44/mth**
Intel Pentium 4-1.7GHz	**$1234.99**	**or $45/mth**
Intel Pentium 4-1.8GHz	**$1249.99**	**or $46/mth**
Intel Pentium 4-2.4B- 512k	**$1284.99**	**or $47/mth**
Intel Pentium 4-2.5B- 512k	**$1324.99**	**or $49/mth**
Intel Pentium 4-2.6B- 512k	**$1379.99**	**or $51/mth**
Intel Pentium 4-2.8B- 512k	**$1559.99**	**or $52/mth**
Intel Pentium 4-3.0B- 512k	**$1649.99**	**or $55/mth**

PREMIER CHOICE GOLD

- ☑ Asus P4SDX Motherboard for Intel Pentium 4 CPUs or Asus A7V8X Motherboard for AMD CPUs
- ☑ Thermaltake Volcano 7 Heat Sink /Fan for AMD CPUs
- ☑ Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- ☑ 80Gb ATA-100 Hard Disk Drive @ 7200RPM w/ 8Mb
- ☑ 512Mb DDR RAM, PC2700, 184 Pin RAM Memory
- ☑ Enlight Mid-Tower ATX Case w/ 7 Bays & 2 Front USB
- ☑ Enlight True 360W ATX Power Supply
- ☑ On-Board SATA Controller & Ultra/133 Support
- ☑ 4- USB 1.1 Ports, 2- USB 2.0 Ports, 1- 1394 Firewire Port, 2- Serial Ports & 1- Bi-Directional Parallel Port
- ☑ Asus v9480/TVD GeForce4 Ti4800 w/ 128Mb
- ☑ Sony 52x24x52 CD-RW Drive w/ Burn Software
- ☑ Sony 16X DVD-ROM Drive w/ 40X CDROM support
- ☑ SoundBlaster Live 5.1 PCI Stereo Soundcard
- ☑ Creative Inspire 4.1-4400 Speaker System w/ Sub
- ☑ On-Board 10/100 PCI Full Duplex Network Adapter
- ☑ Samsung 950B 19" Digital .22hdp CRT Monitor
- ☑ Keytronic 104 Enhanced Soft-Touch Win 95 Keyboard
- ☑ Microsoft Wheel Mouse Optical Mouse w/ Mouse Pad
- ☑ MS Windows XP Home OEM w/ CD and Manual
- ☑ **5 Years Labour & 1 Year Parts Warranty**

AMD Duron 1.3-GHz	**$1639.99**	**or $55/mth**
AMD Athlon XP-2000+	**$1679.99**	**or $56/mth**
AMD Athlon XP-2100+	**$1699.99**	**or $57/mth**
AMD Athlon XP-2200+	**$1704.99**	**or $57/mth**
AMD Athlon XP-2400+	**$1739.99**	**or $58/mth**
AMD Athlon XP-2500+	**$1774.99**	**or $59/mth**
AMD Athlon XP-2800+	**$1929.99**	**or $64/mth**
AMD Athlon XP-3000+	**$2064.99**	**or $69/mth**
Intel Celeron-1.7GHz	**$1649.99**	**or $55/mth**
Intel Celeron-2.0GHz	**$1694.99**	**or $57/mth**
Intel Celeron-2.2GHz	**$1724.99**	**or $58/mth**
Intel Pentium 4-2.4B- 512k	**$1804.99**	**or $60/mth**
Intel Pentium 4-2.5B- 512k	**$1844.99**	**or $62/mth**
Intel Pentium 4-2.6B- 512k	**$1899.99**	**or $63/mth**
Intel Pentium 4-2.8B- 512k	**$2079.99**	**or $69/mth**
Intel Pentium 4-3.0B- 512k	**$2169.99**	**or $72/mth**

PREMIER CHOICE BLACK

- ☑ Asus P4C800 Motherboard for Intel Pentium 4 CPUs or Asus A7N8X-DX Motherboard for AMD CPUs
- ☑ Thermaltake Volcano 7+ Heat Sink /Fan
- ☑ Panasonic 3.5" - 1.44MB Black Floppy Disk Drive
- ☑ 80Gb SATA/150 Hard Disk Drive @ 7200RPM w/ 8Mb
- ☑ 512Mb DDR RAM, PC3200, 184 Pin RAM Memory
- ☑ Nest Mid-Tower ATX Case w/ Window and Neon Lights
- ☑ Enlight True 420W ATX Power Supply w/ 2 Fans
- ☑ On-Board SATA Raid Controller & Ultra/133 Support
- ☑ 6- USB Ports and 4- 1394 Firewire Ports
- ☑ Sapphire Radeon 9700 w/ 128Mb & DVI
- ☑ Sony 48x12x48 Black CD-RW Drive w/ Burn Software
- ☑ Sony 16X Black DVD-ROM Drive w/ 40X CDROM
- ☑ Realtek ALC650 Audio w/ 6 Channel Support
- ☑ Creative Inspire 6.1 6600 w/ 6 Speakers & Subwoofer
- ☑ US Robotics 56K Internal Fax/Modem v.90
- ☑ Dual RJ-45 Ports for Gigabit Network Access
- ☑ Samsung 953DF Black 19" Digital .20hdp CRT Monitor
- ☑ Keytronic KT800 104 Black Soft-Touch Keyboard
- ☑ Keytronic Black Mouse w/ Scroll Wheel
- ☑ Quad LED Color 80mm Second Case fan
- ☑ Arctic Silver III Thermal Heat Compound
- ☑ MS Windows XP Home OEM w/ CD and Manual
- ☑ **5 Years Labour & 1 Year Parts Warranty**

AMD Athlon XP-2000+	**$2069.99**	**or $69/mth**
AMD Athlon XP-2100+	**$2089.99**	**or $70/mth**
AMD Athlon XP-2200+	**$2094.99**	**or $70/mth**
AMD Athlon XP-2400+	**$2129.99**	**or $71/mth**
AMD Athlon XP-2500+	**$2164.99**	**or $72/mth**
AMD Athlon XP-2800+	**$2319.99**	**or $77/mth**
AMD Athlon XP-3000+	**$2454.99**	**or $82/mth**
Intel Celeron-2.0GHz	**$2199.99**	**or $73/mth**
Intel Celeron-2.2GHz	**$2229.99**	**or $74/mth**
Intel Pentium 4-2.4B- 512k	**$2309.99**	**or $77/mth**
Intel Pentium 4-2.5B- 512k	**$2349.99**	**or $78/mth**
Intel Pentium 4-2.6B- 512k	**$2404.99**	**or $80/mth**
Intel Pentium 4-2.8B- 512k	**$2584.99**	**or $86/mth**
Intel Pentium 4-3.0B- 512k	**$2674.99**	**or $89/mth**

Due to fluctuating memory and CPU pricing, check our web site for up-to-date pricing.

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Premier CPUs & Memory

AMD Duron 1.3-Ghz @ 100/200Mhz (Socket A)	see web
AMD Athlon XP 1700+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 1800+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 2000+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 2100+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 2200+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 2400+ @ 266Mhz (Socket A)	see web
AMD Athlon XP 2600+ @ 333Mhz (Socket A)	S see web
AMD Athlon XP 2700+ @ 333Mhz (Socket A)	S see web
AMD Athlon XP 2500+ Barton (Socket A)	see web
AMD Athlon XP 2800+ Barton (Socket A)	see web
AMD Athlon XP 3000+ Barton (Socket A)	S see web
Intel Celeron 1.7-GHz (Socket 478) @ 400Mhz	B see web
Intel Celeron 1.8-GHz (Socket 478) @ 400Mhz	B see web
Intel Celeron 2.0-GHz (Socket 478) @ 400Mhz	B see web
Intel Celeron 2.2-GHz (Socket 478) @ 400Mhz	S see web
Intel Pentium 4-1.7-GHz (Socket 478)	B see web
Intel Pentium 4-1.8-GHz (Socket 478)	B see web
Intel Pentium 4-2.4-GHz @ 533 Mhz (S478) 512k	B see web
Intel Pentium 4-2.5-GHz @ 533 Mhz (S478) 512k	B see web
Intel Pentium 4-2.6-GHz @ 533 Mhz (S478) 512k	B see web
Intel Pentium 4-2.8-GHz @ 533 Mhz (S478) 512k	S see web
Intel Pentium 4-3.0-GHz @ 533 Mhz (S478) 512k	S see web

Full List of CPUs Available Online

128 MB, SDRAM PC/133Mhz	see web
256 MB, SDRAM PC/133Mhz	see web
512 MB, SDRAM PC/133Mhz	see web
256 MB, DDRAM SDRAM PC2100 (266Mhz)	see web
512 MB, DDRAM SDRAM PC2100 (266Mhz)	see web
1 GB, DDRAM SDRAM PC2100 (266Mhz)	S see web
256 MB, DDRAM SDRAM PC2700 (333Mhz)	see web
512 MB, DDRAM SDRAM PC2700 (333Mhz)	see web
256 MB, DDRAM SDRAM PC3200 (400Mhz)	S see web
512 MB, DDRAM SDRAM PC3200 (400Mhz)	see web
OCZ 256 MB, DDRAM SDRAM PC2700	see web
OCZ 256 MB, DDRAM SDRAM PC3200	see web
OCZ 256 MB, DDRAM SDRAM PC3500 EL	see web
OCZ 2x 256 MB, DDRAM PC3500 Dual Channel EL	see web
OCZ 2x 512 MB, DDRAM PC3500 Dual Channel EL	S see web
128 MB, Rambus, 184Pin, PC800 Non-ECC	see web
256 MB, Rambus, 184Pin, PC800 Non-ECC	see web
512 MB, Rambus, 184Pin, PC800 Non-ECC	S see web
256 MB, Rambus, 184Pin, PC1066 Non-ECC	see web

Premier Cooling & Accessories

Thermaltake Volcano 6 CU / CU+	$14.99/$14.99
Thermaltake Volcano 7+ w/ Variable 80mm fan	$39.99
Thermaltake Volcano 9 / 9 Cool Mod	$29.99/$39.99
Thermaltake Aquarius II - Liquid Cooling Kit	B $184.99
Thermaltake SubZero4G - Thermal Electric Cooling	NB $224.99
Thermaltake Case Fans 60mm/80mm/80mm Smart Fan	$9.99/$9.99/$14.99
Thermaltake Crystal Orb / G4-VGA Cool Mod	$19.99/$24.99
Thermaltake Memory Cooling Kit (Passive / Active)	$14.99/$24.99
Vantec Stealth 80mm Case Fan	$9.99
80mm Case Fans w/ Blue/Red LEDs or 4-Color LEDs	$14.99
Arctic Silver III Thermal Paste	$9.99
Removable Hard Drive Rack w/ Fan	B $19.99
USB 2.0 Enclosure (Makes any IDE Drive a USB 2.0 External Drive)	$64.99
Asus i-Panel Deluxe Monitoring System	$59.99
Highpoint Rockethead 100 (Allows EIDE Hard Drive to plug in SATA Port)	$39.99
Cold Cathode NEON Lights - Sound Activated (Blue / Red / Green)	$24.99

Full List of Cooling Supplies Available Online

Premier Motherboards

Motherboards for AMD CPUs

Abit AT7-Max2, Socket A, VIA KT400 (ATX) Non-Legacy	$244.99
Abit KD7-E, Socket A, VIA KT333 (ATX)	$114.99
Abit KD7, Socket A, VIA KT400 (ATX) w/HW RAID	$129.99/$149.99
Asus A7S333, Socket A, SiS745 (ATX)	$89.99
Asus A7V8X, Socket A, KT400 (ATX) Serial ATA	$149.99
Asus A7N8X-DX, Socket A, nForce2 (ATX) Serial ATA	$199.99
ECS K7S5A/Pro, Socket A, SiS 745 Chipset w/ Lan & Sound	$89.99
ECS K7VMM+, Socket A (MATX) w/ Video, Sound & Lan	$89.99

Motherboards for Intel CPUs

Abit BE7-RAID, Socket 478, Intel i845PE (ATX)	$159.99
Abit BH7, Socket 478, Intel i845PE (ATX)	$139.99
Abit IC7, Socket 478, Intel i875PE (ATX) SATA RAID	N see web
Abit IC7-G Max2 Advance, Socket 478, Intel i875PE (ATX)	N see web
Asus P4C800, Socket 478, Intel i875 Chipset (ATX)	N see web
Asus P4PE-Lan, Socket 478, Intel i845PE Chipset (ATX)	$154.99
Asus P4PE-Gbl/SATA/1394, Socket 478, Intel i845PE Chipset (ATX)	$204.99
Asus P4S8X-X, Socket 478, SiS 655 Chipset (ATX)	N $129.99
Asus P4SDX, Socket 478, 915 655 Chipset (ATX)	$179.99
Asus P4T533-C, Socket 478, Intel i850e Chipset (ATX)	$214.99
ECS P4VMM2-3.2a, Socket 478, Via Chipset w/ Lan & Sound	$89.99
ECS P4S5A/DX+, Socket 478, SiS 645 Chipset w/ Lan & Sound	$89.99
ECS P6STMT, Socket 370 (MATX) w/ Video, Sound & Lan	$89.99
Tyan S1854, FC-PGA & Slot 1, Via 133 Chipset (ATX)	$144.99

Full List of Motherboards available on our Website

Premier Networks

D-Link 10/100Mbit Ethernet Card		$14.99
3COM 10/100Mbit Ethernet Card w/ Wake on Lan		$44.99
SMC 10/100Mbit Ethernet Card		B $19.99
Linksys 10/100 Ethernet USB Adapter		B $24.99
Linksys WMP11 - 802.11b Wireless Adapter PCI		B $89.99
Linksys WPC11 - 802.11b Wireless Adapter PCMCIA		B $84.99
Linksys WUSB11 - 802.11b Wireless Adapter USB		B $84.99

Cables, Ends and Adapters are also available

SMC 10/100Mbit - 5 Port Hub	B $44.99
Linksys BEFSR41 Cable/xDSL Router - 4 Port	B $89.99
Linksys BEFSR81 Cable/xDSL Router - 8 Port	B $119.99
Linksys BEFW11S4 Wireless Cable/xDSL Router - 4 Port	B $124.99
SMC Barracade Wireless Cable/xDSL Router - 4 Port w/ Printer Port	B $114.99

Premier Soundcards & Speakers

SoundBlaster PCI 128	$24.99
SoundBlaster LIVE Value 5.1	$44.99
SoundBlaster Audigy 2	N $114.99
SoundBlaster Audigy 2 Platinum	B $249.99
SoundBlaster Audigy 2 Platinum eX	B $314.99
SoundBlaster Extigy	B $199.99
Altec Lansing AVS-200 w/ 2 Speakers	$24.99
Altec Lansing AVS-300 w/ 2 Speakers & Subwoofer	$39.99
Altec Lansing AVS-500 w/ 4 Speakers & Subwoofer	$64.99
Altec Lansing 5100 w/ 5 Speakers & Subwoofer	B $214.99
Creative Inspire 2.1 2500 w/ 2 Speakers & Subwoofer	B $69.99
Creative Inspire 4.1 4400 w/ 4 Speakers & Subwoofer	B $84.99
Creative Inspire 5.1 5200 w/ 5 Speakers & Subwoofer	B $99.99
Creative Inspire 6.1 6600 w/ 6 Speakers & Subwoofer	B $159.99

Premier Hard Drives & Storage

40GB ATA/100 7200RPM EIDE Hard Drive	All Brands	$99.99
60GB ATA/100 7200RPM EIDE Hard Drive		$119.99
80GB ATA/100 7200RPM EIDE Hard Drive		$129.99
120GB ATA/100 7200RPM EIDE Hard Drive		$174.99
Maxtor 160GB ATA/133 7200RPM Hard Drive w/ 8Mb		$269.99
Maxtor 200GB ATA/133 7200RPM Hard Drive w/ 8Mb		$349.99
Maxtor 250GB ATA/133 7200RPM Hard Drive w/ 8Mb	SN	$534.99
Seagate 120GB ATA/100 7200RPM Hard Drive w/ 8Mb		$194.99
WD 80GB ATA/100 7200RPM Hard Drive w/ 8Mb		$149.99
WD 120GB ATA/100 7200RPM Hard Drive w/ 8Mb		$190.99
WD 180GB ATA/100 7200RPM Hard Drive w/ 2Mb or 8Mb	S	$264.99/$314.99
WD 200GB ATA/100 7200RPM Hard Drive w/ 2Mb or 8Mb		$334.99/$349.99
WD 250GB ATA/100 7200RPM Hard Drive w/ 8Mb	SN	$534.99

Serial ATA Drives - More to come...

Seagate 80GB SATA/150 7200RPM Hard Drive w/ 8Mb	N $194.99
Seagate 120GB SATA/150 7200RPM Hard Drive w/ 8Mb	N $259.99
WD 36GB SATA/150 10000RPM Hard Drive w/ 8Mb	N $234.99

Full List of Hard Drive Brands Available Online

Panasonic 1.44Mb Floppy Disk Drive (Black or Beige)	$14.99
Samsung 1.44Mb Floppy Disk Drive (USB)	$44.99
Iomega Zip Drive 250Mb EIDE / 750Mb USB	B $99.99/$234.99
Promise Ultra/133 TX2 Controller Card	B $59.99

Premier Video Cards

Asus v8170/DDR/SE GeForce 4 MX440 64Mb DDR TV-Out	B $84.99
Asus v9520/TD GeForce FX FX5200 128Mb DDR TV-Out	NB see web
Asus v9520/VS GeForce FX FX5200 128Mb DDR Video In/Out	NB see web
Asus v9460/TVD GeForce 4 Ti4800 128Mb DDR Video In/Out	NB $279.99
Asus v9560/VS GeForce FX FX5600 128Mb DDR Video In/Out	NB see web
Asus v9900/TD GeForce FX FX5800 128Mb DDR TV-Out	NB $544.99
Asus v9900/Ultra GeForce FX FX5900Ultra 128Mb DDR TV-Out	NB $744.99
ATI Xpert 2000 Pro w/ 32Mb SDRAM AGP	$39.99
ATI Radeon 7000 w/ 64Mb SDRAM AGP w/ Video Out (Sapphire)	$54.99
ATI Radeon 9100 w/ 64Mb DDR AGP w/ Video Out (Sapphire)	$99.99
ATI Radeon 9100 w/ 128Mb DDR AGP w/ Video Out (Sapphire)	$124.99
ATI Radeon 9500 w/ 128Mb DDR AGP w/ Video Out (Sapphire)	$224.99
ATI Radeon 9500Pro w/ 128Mb DDR AGP w/ Video Out (Sapphire)	$249.99
ATI Radeon 9500Pro w/ 128Mb DDR AGP w/ Video Out	B $299.99
ATI Radeon 9700 w/ 128Mb DDR AGP w/ Video Out (Sapphire)	$329.99
ATI Radeon 9700Pro w/ 128Mb DDR AGP w/ Video Out (Sapphire)	$444.99
ATI Radeon 9700Pro w/ 128Mb DDR AGP w/ Video Out	B $459.99
ATI All-In-Wonder Radeon 7500 w/ 64Mb AGP DDR	$179.99
ATI All-In-Wonder Radeon 8500DV w/ 64Mb AGP DDR	$244.99
ATI All-In-Wonder Radeon 9700Pro w/ 128Mb AGP DDR	B $514.99
Leadtek WinFast GeforceI A280 LE TD w/ 128Mb VIVO	B $244.99

Full List of Video Cards Available Online

ATI TV Wonder PCI	B $99.99
Leadtek WinFast TV 2000 XP - TV & FM Tuner	B $89.99

Premier Barebones

Shuttle SS51G (Socket 478) w/ SiS651 Chipset	B $349.99
Shuttle SB51G (Socket 478) w/ Intel 845PE Chipset	B $414.99
Shuttle SN41G2 (Socket A) w/ NVidia nForce2 Chipset	B $474.99

Barebone Accessories

Shuttle PC8 Parallel Port	$24.99
Shuttle PP9 Carrying Bag	$49.99
Shuttle PC10 Internal USB 6-in-1 Card Reader	$74.99

Premier CD/DVD-ROM & RW Drives

Sony 52X CD-ROM Drives (7.8MB/Sec)	$29.99
Pioneer / Sony / Toshiba 16X DVD-ROM Drives (Beige)	$54.99
Pioneer / Sony 16X DVD-ROM Drive (Black)	$64.99

Full List of Drives Available Online

Plextor Plexwriter CD-Re-Writer (48x/24x/48x)	$139.99
Panasonic CD-Re-Writer w/ Burn-Proof (40x/12x/40x)	$74.99
Samsung CD-Re-Writer w/ Burn-Proof (40x/12x/48x) (Black)	$79.99
Sony CD-Re-Writer w/ Burn-Proof (48x/12x/48x) (Black)	$79.99
Sony CD-Re-Writer w/ Burn-Proof (52x/24x/52x) (Beige)	$74.99
Samsung DVD/CD-RW Combo Drive (48x/24x/48x/16x) (Beige)	$114.99
Pioneer DVR-A05 (DVD-RW & CD/RW)	$379.99
Sony DWU-10A (DVD-/+RW & CD/RW)	NS $484.99

Premier Fax Modems

56K Int. (v.90) AMR	$14.99
Rockwell 56K Int. w/ Voice (v.90) PCI	$19.99
US Robotics 56k Int. PCI WinModem / Hardware	$29.99/$79.99

Premier Cases

Economy Mid Tower Case w/ 6 Drive Bays (ATX)	$24.99
Premium Mid Tower Case w/ 6 Bays (ATX) 300W	$74.99
Enlight Desktop Tower Case w/ 7 Bays (ATX)	$59.99
Enlight Mid Tower Case w/ 7 Bays (ATX)	$59.88
Enlight MicroATX Tower Case w/ 6 Bays (MATX) 200W	$69.99
Enermax CS-3051L Mid Tower Case w/ 10 Bays (ATX)	$69.99
Nest Tower Case w/ 7 Drive Bays (ATX) Window	$84.99
AOpen Full Tower Case w/ 13 Bays (ATX) 300W	$119.99
Chenming ATX601E Aluminum Tower Case (ATX) MULTI COLOR	$124.99

Full Line of Thermaltake & LianLi Available - Pricing Online

Thermaltake A6000A Aluminum Tower Case w/ Window (ATX)	$214.99
Thermaltake Xaser III V1000D Steel Blue ATX Case	$244.99
Thermaltake Xaser III V1000A Steel Black ATX Case	$244.99
Thermaltake Xaser III V2000A Aluminum ATX Case	$324.99
LianLi PC-60USB Aluminum Case (ATX)	$184.99
LianLi PC-61USB Aluminum Case (ATX)	$199.99
LianLi PC-6089 Aluminum Case (ATX)	$254.99
LianLi PC-70 Full Tower Aluminum Case (ATX)	$289.99

250W - 520W Power Supplies Available - Pricing Online

Economy 250W Power Supply	$24.99
Cyberzone 300W Power Supply w/ 2 fans	$44.99
HEC 300W Power Supply	$54.99
Enlight 360W Power Supply	$54.99
Enlight 420W Power Supply w/ 2 fans	$69.99
Enermax 365W Power Supply w/ 2 fans	B $69.99
Enermax 465W Power Supply w/ 2 fans	B $109.99
Vantec 520W Black Aluminum Power Supply w/ 2 fans	B $184.99

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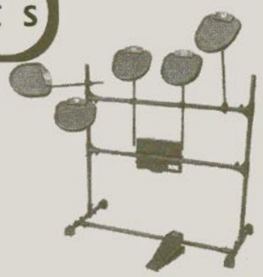

Drums, phones, assistants and whatnot

By ANDREW MOORE-CRISPIN

Drum kit goes digital

One of the biggest problems home audio studio users face is recording drums – not only the problem of accurately capturing the sounds a drum kit makes, but avoiding the wrath of the rest of the family for making so much noise.

With this in mind, Pacific Digital (www.pacificdigitalcorp.com) recently released what it is calling the first USB digital drum kit.

The DrumXtreme includes 14 complete sound banks and better than 130 different samples, the company says. Such a technology could also ease the aural pain of a parent whose child wants to learn to play the drums; the DrumXtreme can be played muted, through headphones plugged into the computer or, likely the least desirable option in this particular case, played full blast through the PC's speakers.

The drum set is rack mounted, unlike most similar consumer-level electronic drum kits, where each pad is housed in the same unit. Pacific Digital says the rack mounting makes the electronic digital drum set more like a traditional kit, with drum pads at different levels and a foot pedal for the bass drum on the floor.

The DrumXtreme is powered by the USB connection, and assuming the PC it plugs into is equipped with speakers, nothing else but the drivers is required to get up and drumming.

The DrumXtreme kit comes with five pads, a foot pedal, drumsticks, cable and a DX-Box audio host, and costs about $435 (from US$299). The company will also be selling an accessory kit that includes a sixth drum pad and another pedal for US$49.

Megapixel camera phones

We've been hearing about camera phones for some time now, and while they have yet to catch on in North America, J-Phone Co. (www.j-phone.com), a unit of Vodafone, is set to release the first ever megapixel camera phones.

The megapixel camera phone handsets represent a quadrupling of the resolution of current camera phones, and analysts say they could compete with low-end digital cameras, though there are still doubts about whether consumers will be buying.

As with most cool technology, Japan will see the megapixel camera phones well before North American consumers. DoCoMo, the biggest Japanese cellular service provider, will be bundling service packages with the megapixel phones when they are released in May.

One megapixel is about the minimum resolution required to make a decent quality standard sized print.

Nokia sticking with new form factor

Nokia (www.nokia.ca), already gearing up to launch the N-Gage mobile game deck (see New Products, *TC!* February - archived on CanadaComputes.com) has launched a phone in a similar form factor aimed at mobile music enthusiasts.

The Nokia 3300 looks suspiciously like the N-Gage, but rather than have a D-pad to the left of the relatively large colour LCD screen and numerical keys to the right, the handset features a full QWERTY keyboard split between the two sides.

The 3300 plays MP3 and AAC files and allows users to set their music files as ring tones, which means that now, instead of having a bad MIDI version of *Knight Rider* play when the phone rings, users can have the real thing.

Nokia says the 3300 will weigh less than 125 g and will last for up to 11 hours of digital music playback, nine hours of radio listening, three hours talk time or 270 hours of standby.

Another product we won't see in North America for some time.

RIM adds voice, e-mail organization

Research in Motion (RIM, www.rim.com) unveiled its new 6210 model BlackBerry in North America at CTIA (Cellular Telecommunications & Internet Association) 2003, held in New Orleans.

The 6210 is Java-based and promises greater storage space with 16 MB flash memory for data and applications.

The new communicator adheres to the familiar BlackBerry form and offers phone capabilities, SMS messaging, e-mail and Web access over the 1,900 MHz GSM/GPRS wireless standard.

RIM says the new model also supports cradle-free e-mail synchronization with a desktop PC, with support for filing, deletion and read/unread status as well as integrated attachment viewing for some popular files like *Office* suite programs, ASCII text and PDF files.

The Virtual Keyboard

Siemens (www.siemens.com) released photos of its Virtual Keyboard over a year ago, but the product moved a big step closer to the market when Matsushita Electric Industrial Co. announced it has licensed the technology and will release the product this year for use with cell phones and PDAs.

The Virtual Keyboard projects a red image of a QWERTY keyboard onto a flat surface and detects user interaction with the infrared and visible light projection to input text in mobile devices.

The device weighs a scant 160 g, and USB or battery-powered models will be available.

The company says the Virtual Keyboard will cost about 10,000 yen, approximately $123, and there are plans for the product to hit North America within the year. ◆

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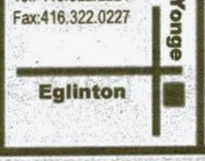

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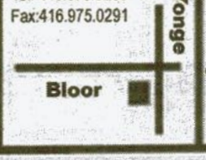

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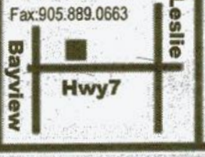

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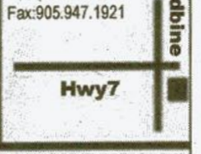

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Looking at video camcorders ...

Ask the right questions before you buy

By LEE RICKWOOD

Buying the right video camcorder is a tough decision. There are hundreds of choices and a ton of information to guide you. But the best questions can be obscured in a blizzard of facts, figures and technical specifications.

A handful of camera features and functions really determine, video quality; most others are superfluous gimmicks. What's important and what's an expensive extra?

The first decision is easy

Knowledgeable users and vendors agree – it's no hype that digital offers significant advantages over analogue.

Digital video looks better – in terms of line resolution, measurably so. Unlike analogue, it can be copied and edited with no signal loss or image degradation and it's a shorter step to streaming on the Web, video mail and DVD.

You could save a few bucks buying analogue, like Hi-8 or VHS, but you'll regret it. Perfectly capable digital camcorders are now $800 to $1,000, and the price continues to drop.

So choose digital over analogue. (All the features and functions discussed here relate to digital video camcorders, particularly those using the DV tape format.)

Videographer, know thyself!

The most important question to pose when choosing a camcorder is to yourself – why do I want it and how will I use it?

If you don't ask the question, a good dealer will. All we spoke to agree – knowing the application behind a video purchase is critical.

"We give 'em the third degree," laughs Fred Konkin, video sales manager for Vistek, Ltd. "Really – it's important to ask the customer a lot of questions to get the proper match; find out about their needs now and their aspirations for future use."

Having that feel for how you will use the camera means finding out how the camera itself feels.

Shooting video is a very tactile experience, so the camera should feel good in your hands. It should be comfortable and convenient to use.

"Generally, the big plus with smaller size is more convenience. Users tend to carry it with them more and get more use out of it," says Royce Merkle, general manager, Merkle Camera and Video. "Some videographers like the stability of a larger camcorder, but smaller is considered an advantage in the consumer market," he adds. "Arguably, a downside of smaller cameras is access to controls, smaller buttons and so on ... so be sure and try the camera out first."

All those buttons control a wide range of features, functions and special capabilities. Too wide?

"The average buyer might use half the features and functions on a digital camcorder," says Alex Hille, senior sales associate for Henry's Photo Video.

So is all that information giving us an education or causing us confusion?

"There is a lot of highly technical camera information, and a majority of people want a simple 'memory machine,' but businesses, pro shooters and independent filmmakers are using digital video, too," Hille explains. "There are cameras for each of them, but again, you've got to know how and why you're going to use the camera and its features."

Digital video looks better — in terms of line resolution, measurably so. Unlike analogue, it can be copied and edited with no signal loss or image degradation and it's a shorter step to streaming on the Web, video mail and DVD.

Image sensors

One of the most important camcorder features is the type of imaging device it employs.

Called a CCD (for charge-coupled device) or chip, the sensor is covered with tiny pixels (for picture elements) that turns light coming through the lens into electronic signals, stored as digital data.

Chips are a significant contributor to image quality; they dramatically affect colour balance and low-light shooting capability.

Generally, the more chips the better. One of the main dividing lines in camcorder price and quality comes between the one-chip and three-chip variety. Less expensive cameras typically use a single chip to sample the three basic image components – red, green and blue. More expensive cameras use a separate CCD for each, resulting in a more realistic and detailed picture.

But as Konkin says, "The number of chips is not as important as it used to be. Chips come in different sizes. Now there are smaller chips with high pixel counts. Megapixel chips – a million or more pixels – are common on the market."

The minimum pixel count for good resolution DV images is around 680,000; it gets better going up from there, but it also gets more expensive.

Lens and zoom features

As well as the CCD, the optical quality of the camera's lens influences all aspects of the image, from sharpness to colour saturation to brightness.

Hille says today's lenses, whether glass or plastic, deliver a good image, often better than the chip can handle. What he's concerned about is the zoom lens, and how it's often pitched as "the bigger the better" by some marketers. A true optical zoom changes image magnification before it hits the CCD. "The digital zoom is an effect, not a feature," he says scornfully.

Merkle agrees; the bigger the digital zoom, the worse the picture. "At 300x, it's an atrocious picture. Typical cameras have a 10x or 12x optical zoom, which is fine – equate it to a strong telephoto on a still camera. There are some good optical zooms that go as high as 20x," he adds.

A word of caution – even the smallest cameras can have a zoom mechanism, but be careful it can't be heard by the on-board camera microphone.

Image stabilization

Like the zoom, there are both optical and digital image stabilizers. And, like the zoom, most experts caution against the latter, even though it may cost less.

With optical, a special element inside the lens actually moves to compensate for the shaking image, giving a nice image without jitter. Digital or electronic stabilizers often use extra pixels to compensate. The "slower" ones may actually "fall behind" when you move the camera, leaving ghostly or jumpy images behind.

Viewfinder/display

There are different ways to view the camera image. Black-and-white viewfinders are generally sharper, which is better for focusing. Popular flip-out LCD displays reflect colour reasonably well, but they do cost a bit more and deliver an image that's not quite as sharp.

LCDs may blank out in bright sunshine, but they make playback of recorded footage much more comfortable.

"Viewfinders draw less battery power, but LCDs help with creative shooting angles and POV [point-of-view] changes," says Konkin. In other words, it's important to have both and use them appropriately.

Connections

Connectivity to and from other devices is an important camcorder feature. The basics are usually standard, including A/V output to a TV (composite or RCA plugs are good, S-Video is better) and digital output to a computer, particularly IEEE 1394 (also sold under brand names FireWire and iLink) capability.

"A video in connection is also a nice feature if you want to dub older analogue footage onto DV for editing," Hille adds.

Still image capability

A video camera's ability to take still pictures is important to about half of all buyers – and why not? "At the basic level, digital still capability is a $100 option," says Merkle. "It's not that much more, but if you want to make good prints from your stills, make sure the CCD is 1.5-megapixel or better."

Built-in light/low-light capability

Adding light can dramatically improve the overall quality of your video, creating

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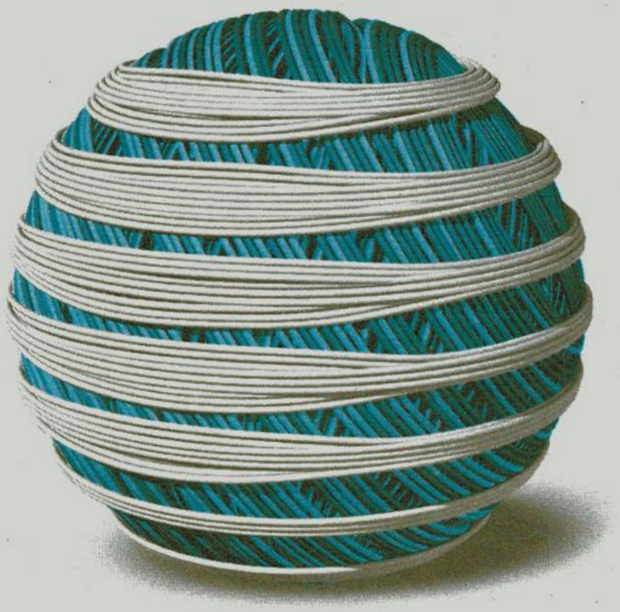

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Looking at video camcorders ...

continued from page 10

more contrast in your shots. A built-in light is a really good feature. Camcorder pictures always benefit from extra lighting, even with digital resolution.

Cameras with a low-light mode allow you to record in conditions that are close to complete darkness, but the image will be noisy and grainy.

Audio connections and accessories

Although cameras come with a microphone, serious shooters want to connect an external microphone; a camera with mike input as well as a headphone jack for monitoring audio during recording is important. Digital camcorders can record sounds as 16-bit audio, which is equivalent to home audio CDs, or as 12-bit, which allows for an extra track to be added later.

Accessories make the videographer

Accessories are just the kind of thing that can determine the purchase of a camera, says Konkin. With the right audio jacks, a world of creative audio opportunities opens up.

Most cameras have threaded lenses, so diffusion filters and coloured gels may be added to stunning visual effect. Some lenses have the ability to add fish-eye or wide-angle adapters and telephoto extensions.

Small on-board lights were mentioned; so too, accessory hot-shoes that make powering the light, or a microphone, easy and convenient.

Tripods (or mono-pods) add stability to your shots and are considered must-haves. They screw into the bottom of the camcorder – or better still, a handy quick-release tripod plate.

Most cameras come loaded with all sorts of special digital visual effects – ignore them. Shoot the best video you can and muck it up in post-production if you really have to. ◆

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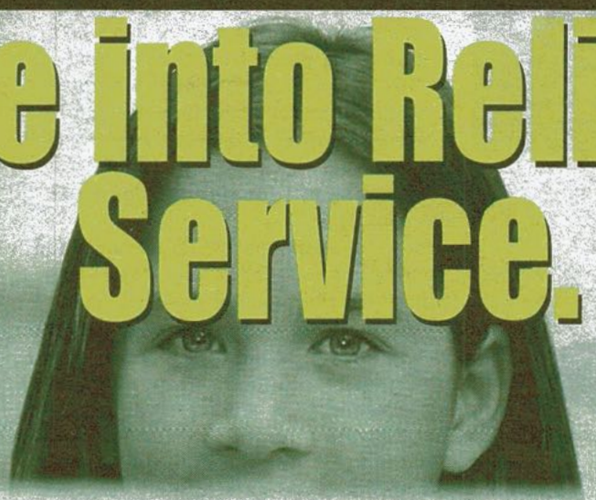

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Using video for self-promotion

By TOM VENETIS

"... right away they take the CD with the video and put it into the computer ..."

—Al Simmons

Toronto-based children's performer and musician Mark Kersey loves jazz and swing music from the '30s and '40s. When he got together with his singing partner Zoey, they decided to record a video of themselves performing along with Blossom Dearie's recording of *Give Him the Ooh La La* at the studio of a friend.

"So we went to his studio and set up a camera and we began goofing around," Kersey says, "and I later took the footage, cut and pasted it together, made some of it black and white and put together a video."

That video became a promotional tool for their act Loungevity, and when they sent the video, now burned onto a standard CD, around to various clubs and potential festivals, it helped Loungevity land some pretty decent gigs. One was the Celebrate Toronto festival, which was unfortunately cancelled because of last summer's garbage strike.

"But we got booked by Toronto City Hall on the strength of that video," Kersey says. "I now send video CDs to anyplace I think I can get a job."

Kersey sends out digital videos of his various other acts as well. These include his children's group, The Stylamanders and the Duelling Pianos, in which he performs with Randy Vancourt. Vancourt is well known for his work with the Second City touring company and on the YTV show *Don't Lick the Pig.*

The advantages of using digital video as a self-promotion tool are obvious for someone like Kersey. When he sends a professional looking video on CD along with a press package to a club manager or festival organizer, it lets them get a better look at his act immediately and make hiring decisions more quickly. As well, a solid video can sometimes replace live auditions.

"Usually, I would go to a place and perform live and that was time consuming and a bit frustrating as sometimes you are not 100 per cent on your game," Kersey continues. "Whereas with a video, if you have shot a live performance, that really sells. People say that a picture is worth 1,000 words. Well, video is worth much more than that."

Kersey says that digital video technology has become simple to use, and it has become much easier today to use digital video as a self-promotion tool. He shoots almost all of his videos himself on a Canon digital video camera, then edits the footage on his home PC and mixes the sound on an Apple-based system before moving it over to the video.

Using the CD format has proven to have other advantages for self-promotion. Along with the videos, Kersey adds other promotional materials to his CDs, including high-quality publicity photos, images shot at various gigs and media information. Kersey has also added some of the videos to the Web sites promoting his various acts, such as www.loungevity.com, and he offers MP3 music from his group The Stylamanders at www.thestylamanders.com. He plans to include video clips of The Stylamanders when he redesigns the site.

Hook, punch line and hotlink

Kersey is not the only performer to find digital video ideal for promotion. Winnipeg, Manitoba-based comedian and performer Al Simmons (www.alsimmons.com) – who models his act and rather outrageous props on the works of such comedian greats as Danny Kaye, Spike Jones and Jimmy Durante – has found digital video to be a great way of getting people interested in booking him and points out that the digital video on CD format was an improvement from using standard video tapes that went out with press packages.

"I was surprised at how convenient it was to go with video and it proved to be a very good move for me," Simmons says. "This is what really surprises me. A press package arrives at someone's office and usually beside them is a computer and almost right away they take the CD with the video and put it into the computer and there I am as they watch the video. It even has a hotlink directly to my Web site. More often than not, a video tape would end up in the trunk of a car and get kicked around for months without getting watched."

Currently, Simmons has some 20,000 CDs circulating with digital videos of his performance and television appearances. He is planning a new version that will include a wide range of press and supplementary promotional materials along with the videos. Video clips of Simmons' act are also available for download at www.livetourartists.com/al_simmons/.

While it is too early for Simmons to say whether the videos are having a substantial impact on his bookings, he does know that he got one gig on the strength of the videos and has heard from others who have expressed interest in hiring him based on the videos they have seen.

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FEATURE

Getting video from drive to disc

By LEE RICKWOOD

One of the best ways to deliver video is not on cassette, but on optical disc. DVDs are the most recent – and most popular – example, but CDs and other media can also be used to store, deliver and even capture digital video.

The basic process of getting video onto disc involves four main steps – capture, encode, author and burn. There are shareware programs and off-the-shelf packages available to help at each stage. Some programs do it all from a single application, or users can opt for dedicated tools that offer greater control over the quality of the final product. In addition, there are excellent CD recorders, DVD burners and multi-drive desktop replicators available at a fraction of the price they were just a year or two ago.

That being said, there are still some tricks and challenges when "rolling your own."

Capture

Capturing source material and getting it into a computer is the first step. Video may come from pre-existing material, such as a VHS videocassette, may be taken from TV or satellite (without violating copyright, of course), or it can be original material recorded with a camcorder.

Capture cards, which are usually platform-specific, get the video into a computer. They go into an available PC slot, and connect to a camera or other external video device.

The capture device will have what's called a codec on-board. Hardware- or software-based, it COmpresses and DECompresses video according to technical requirements and user preferences.

Encode

Once the material is captured, it needs to be encoded – converted from its native format into one compatible with VCDs and DVDs. Some tools on the market combine capturing and encoding with little or no operator input.

Whether the process is manual or automatic, encoding turns source video into MPEG video. It's the big squeeze, and the better the tools you use, the better your video looks. Of course, the better the tool, the more expensive it is.

Uncompressed video takes up a huge amount of space – each second uses about 30 MB. CDs hold about 650 MB of data, so you see just how much squeezing is needed to get video to fit. There are ways to optimize the encoding process, such as using a lower frame rate (normal TV is 30 frames per second; fewer frames can be visually acceptable and involve less work to process). Reducing the video window size (such as from full screen to a quarter-screen window) also helps – and may be required in certain formats.

Source material with minimal action or motion encodes more easily. Noise or grainy source material can cause encoding bottlenecks, so always use the cleanest possible footage. It is harder to compress interlaced video, so encoding tools should also allow for deinterlacing the video.

Author

Authoring creates a navigation structure to find and play back the encoded video, and prepares it for recording to a disc.

Authoring is not editing – in most cases, the video must be edited with a dedicated package first. But authoring does involve creating text, graphics, chapter buttons and menus for navigation, as well as building the appropriate file structure for playback.

Some authoring packages use wizards or pre-set templates to speed up basic authoring activities. The more comprehensive and professional packages allow for a great deal of menu creativity and customization. Some also allow you to add interactive elements, auto-play programs or other special features.

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VCD, SVCD, and DVD specifications

	VCD	SVCD/CVD	DVD	DV*
Video size NTSC/PAL	352x240 352x288	SVCD 480x480 480x576 CVD 352x480 352x576	720x480 720x576	720x480 720x576
Video compression	MPEG-1	MPEG-2	MPEG-2	DV
Video bitrate (average)	1.15 Mbit/s	1.5-2.5 Mbit/s	3.0-8.0 Mbit/s	25 Mbit/s
Audio compression	MPEG-1	MPEG-1	MPEG-1, MPEG-2, AC3, DTS, PCM	DV
Audio bitrate (average)	224 kbps	128-384 kbps	192-448 kbps	1,000-1,500 kbps
File size (per minute)	10 MB/min	10-20 MB/min	30-70 MB/min	216 MB/min
Video capacity (typical)	74 min	35-60 min	120+ min	63 min
DVD player compatibility	Very Good	Good	Excellent	None
Quality	Good	Very Good	Excellent	Excellent

DV tape format for comparison only

more INFO

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www.cdrfaq.org

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Struggle of the boards

By MIRYANA GOLUBOVICH

Jeeves is a fraud. Yeah, Jeeves, your super-human Internet butler and smug poster boy for Askjeeves.com. Sure, he invites Web users to ask him anything – like a techno wise man with answers to all – and gives the tip to "enter a question, word or phrase and then click 'ask.'" But he's not real, and he won't answer the question.

Whether the question or comment be technical, theoretical, hypothetical or opinion-based, please turn your attention to one of hundreds of thousands of friendly neighbourhood message boards. They're community gathering spaces for the future, and have come a long way from the BBSes we all used to know and love. Today the Internet is host to thousands of messages a day, posted by people with questions, concerns, comments or by anyone looking for a good discussion that they may not have been able to find outside of cyberspace.

While the guy at your computer shop down the street is still scratching his head as to why your computer shuts down spontaneously on its own, someone named Compuwhiz or Cowboy72 or Green88 at Howstuffworks.com's computer discussion folder will be able to add in their two cents about a time it happened to their computer, or maybe about the time they fixed that problem for a friend, or maybe just wish you good luck. In any case, there will be people considering your dilemma. Message boards are the ultimate forum for asking and debating anything, and anyone has the opportunity to speak.

Wanted: Online peacekeepers

Although most message boards allow considerable freedom of speech, many boards do have moderators to make sure users don't fall too far out of line. Message boards can be designated public or private, and many have rules to govern their users. Most require registration to post, and some even to view messages.

Mary Elizabeth Williams, moderator of Salon.com's Table Talk boards, posts every day that she's working, using her real name. "I believe it's important for the community that our members know that they're conversing with a real person," she explains. "If the conversation is lively, I want to be a part of it." She estimates that she reads hundreds of posts each day. "I usually look at threads that have had a surge of new activity, ones in which I know users ask questions or request assistance of me, the ones where I'm a 'regular,' and a random sampling." She says she doesn't get to everything every day, but does get a good idea of what's going on with Table Talk from what she reads.

Many message boards are free to join, but to register for Table Talk, users are required to pay a fee of US$6.50 per month for the basic user option. Table Talk has been around since Salon.com first began in November 1995, and has a strong community that Williams says is pretty much self-regulating, so she doesn't intervene too often. "Users often mediate their own disputes, which is better for everyone," she says. "But if I need to step in and remind someone of the rules, I will."

Jill Lassaline, founder, site operator, and moderator of Parentsworld.com, a Calgary-based Web site for single parents, says "Board moderation is a fine line sometimes and one that I struggle with when issues do come up." Her rules are simple and outlined in the agreement a user must click through to register: Don't post ads, links to a business or money making schemes; don't post anything offensive; don't post a URL to another site and don't post personal ads. "Just behave, use common sense, and be nice or I'll ban you and Sue will beat you up." It's not too clear who Sue is, but the sentence ends with a colon-plus-bracket smiley face.

Lassaline began her site's message board five years ago – five years after giving birth to her Web site – as a tool to draw people to her site in an interesting new manner. "I heard that it'll draw people in and make people come back," she explains. "You can get 20,000 people a day reading, but it's the people coming back that you want."

Since January 2001, she's had 2,180 people register, and received countless postings a day, of which she tries to read each one. Re-posting advertisements after being asked not to is Lassaline's most common reason for banning people from her message board. "I had one woman fight with me that she had a right to post whatever she wanted." The woman kept repeating her offense, so Lassaline banned her. While she says the board is fortunate to have many good users, she has had to ban people for harassment. "People with a lot of free time on their hands seem to enjoy coming in and posting messages about how single moms are just money grubbing *itches," she says, and sarcastically adds that it "must be the extravagant lifestyles we live."

Lassaline has had many heated debates over several hot topics on her message board that she watches closely. Child support has been an issue that has come up time and time again, and although the message board is primarily for parent-based issues, she has had other controversial issues break out, like gun control. "Usually I'll let people speak. If they're way out of line, the whole thread just disappears." She rarely edits a post, and doesn't even have a bad word filter. "I figure we're all grown up, we've seen them," she says. There was one incident though where she had a guy posting who she believes was drunk, because his language got worse and worse as he posted. "We did go in at the time and edit out a few of ☛

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Struggle of the boards

continued from page 19

his words," she explains. "But then it got to be a joke, because you could see what we were editing out."

Rob Harris, editor of CMG (Canadian Motorcycle Guide) Online, and moderator of the site's Soapbox, has only ever banned three people in the five-year history of the message board. It was only during a recent incident regarding a user he had to ban that he realized it's not as easy as picking someone up and throwing them out of your house.

Harris banned a former user of CMG's Soapbox after an issue between the user and Harris's other moderator got personal. The user didn't want to leave without a fight, so even though Harris banned him by blocking his IP address, the user launched an attack on the message board by sending a whole slew of messages from several different public computers.

"Banning someone can be tricky for two reasons," says Harris. "One, they can work around it really easily by going somewhere else or by changing their IP address and two, someone else might get their IP address and then they're banned as well." The issue was eventually sorted out after the mess was openly discussed on the Soapbox, with the user agreeing to leave.

Libel liabilities

Although Lassaline and Harris have both had to deal with messy situations on their message boards, neither has ever had any legal issues arise. Harris says it's a grey area where the responsibility lies when something libelous is said. Does the onus fall on the host of the message board if there are any defamatory comments posted? "I would think not, because if the host is responsible, then essentially what you're saying is the whole culture of bulletin boards is illegal, 'cause there's no way you can avoid it," says Harris. "If you're doing that, then the freedom of speech issue becomes a bit paramount."

However, Canadian message board hosts may find that defense to be less solid than they would like. According to Michael Geist, a law professor at the University of Ottawa who specializes in Internet law, there is something in US law that exempts intermediaries such as message board providers, but not in Canadian law. "We don't have equivalent legislation in Canada, though most people would probably argue that message board providers would similarly not be held responsible for the postings of their users," says Geist. "The operators certainly seek to ensure that is the case through legal language on their sites and in their contracts with posters."

There have been Canadian cases where message board users ran into some legal trouble regarding their postings. In 1998, Philip Services Corp. won a court order forcing some ISPs to give up the anonymity of users posting messages that defamed the Canadian waste management company. Some ISPs revealed the identities of some of the users; others deleted the messages in question.

In the US, there have been a couple of big cases where companies have involved message board providers in suits regarding defamatory statements by users. In 2001, Medinex Systems, Inc., tried to sue several Yahoo! message board users after critical defamatory remarks showed up online. Medinex eventually dropped the suit, which attempted to force Yahoo! to provide the identities of 14 users, some of whom were claimed to be shareholders and employees of Medinex. There was also the 2theMart.com case, in which US District Judge Thomas Zilly dismissed a subpoena on the hunt for the identity of people posting their opinions on an InfoSpace message board.

In both cases, the plaintiffs took direct action against the message board users. The message board providers weren't at risk, due to a rule in US law. "There's a statute that specifically says that when you are a provider of an online service, and it's someone else's content, you are not treated as the speaker or publisher of that speech," explained Lee Tien, an attorney with the Electronic Frontier Foundation, a non-profit US organization that focuses on protecting digital rights. "That's why AOL can have all these chat rooms, and if someone in the chat room says something defamatory, AOL is off the hook. It's not their problem."

With the constant increase of message board use and the increasing number of message board users, it is safe to assume that there will continue to be users banned from boards, and that more legal issues will arise. The main question concerns the definition of the content found on message boards: is it simply coffee table talk between friends that shouldn't be regulated, or is it published material that should go through an editor?

The one thing that's for certain is that moderating message boards is trying to control something uncontrollable. Harris says it's like a living thing. "The Soapbox is a baby to me," he says. "I know when it'll bite you and when it won't. I see people go on and they'll say something, and know they're gonna be in so much trouble. It's interesting as you watch it unravel." ◆

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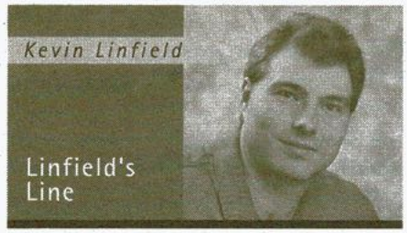

GPS add-on keeps PDA users on-track

Adding to my seemingly never-ending list of PDA accessories, I received a Navman GPS for my birthday a few months ago. Not knowing many details about what a GPS (Global Positioning System) is or does, I used the Internet to quickly get up to speed. Did you know that the US government operates a fleet of 24 orbiting satellites called NAVSTAR, or Navigation Satellite Timing and Ranging? These satellites broadcast the exact time and their exact position over Earth. A GPS receiver analyzes the signals from the closest satellites and calculates exactly where it is. Best of all, there are no subscription fees or charges besides the cost of the hardware and/or software.

The Navman Package

My birthday present was a Navman p Series GPS (www.navman.com), which works with the older Palm III, V and VII units. Rest assured that Navman also makes GPS hardware that works with all m-series Palms, the Compaq iPAQ PocketPC and even a unit for USB-equipped notebook computers. My package included the GPS receiver (which attaches to the back and bottom of my PDA), an in-vehicle suction mounting bracket and two power adapters (an AC and a car DC).

It includes *Rand McNally StreetFinder Deluxe* software (on four CD-ROMs) for tracking, finding waypoints and navigating right down to house numbers, but I was very disappointed to learn that it contains maps of the US only. This means that the software is of very limited use for the average Canadian unless they take frequent trips across the border. To use the Rand McNally software, you must install it on a Windows PC, plan your route, then upload your trip to your PDA for use on the road. Taking up hundreds of megabytes of storage, you must have access to your PC in order to install routes on your PDA.

Other software

What good is a GPS without relevant software? With a bit of searching on the Internet, I found GPSPilot's *TripPilot* software. This package includes detailed street maps of over 13 countries (including Canada) and a quick trial was all I needed to make my decision with my wallet. The software is US$40 but is well worth it. Be warned that it is an Internet-based program, requiring a connection to the company's Web site for downloading maps and trip itineraries. It works with a PDA modem or via Windows using third-party software such as *Mocha-W32 PPP* (www.mochasoft.dk) and I have used both methods with perfect success.

Using the Navman

I've been fooling around with my Navman for the past few months. The GPS works for about three hours between charging and since it can connect with up to 12 satellites (ie. 12 channels) I have not had any problems using it in my car.

Of course the hardware is only as good as the software, since I'm using it on my PDA. There are numerous commercial and freeware applications available that take advantage of using a GPS/PDA combination. I like having the reasonably large PDA screen, the availability of third-party applications (like software that supports Canada), the virtually unlimited memory (especially with newer PDAs) and additional capabilities.

Of course, I need to be careful, as my Palm is not as rugged as a standalone GPS and it is definitely not weatherproof. There is not much chance I'm taking this with me on my kayak. I've read that GPS accuracy is affected by the Earth's ionosphere and I've noticed that the position of the receiver with respect to obstructions such as buildings or the car roof is very important. Although I have not experienced this, I've learned that accuracy depends on US Department of Defense clearance. There are two signals being sent from the NAVSTAR satellites: One for military use and one for civilians. It has been only recently that civilian users have been allowed to get an accurate (within less than 100 m) reading, and the US government could change this at any time.

More information can be found at www.navman.com for the Navman GPS units. I learned quite a bit from Dale DePriest's GPS Web site at www.gpsinformation.org/dale. Highly recommended for great info on GPS receivers and navigation in general.

Personal e-mail to Kevin Linfield can be sent to linfield@rocketmail.com. ◆

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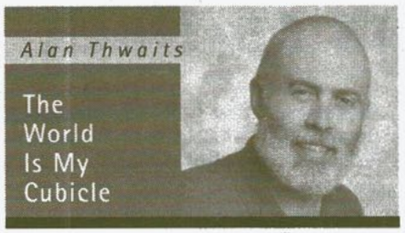

Something to believe in

It's said that conspiracy theories are most popular when times are stressful. Your humble correspondent respectfully disagrees. From my reading of history (as, I must note, an enthusiastic amateur, not a professional), it seems that conspiracy theories abound at all times. We're lucky to live in an age when communication is everything – so we have access to more such theories than our forefathers and foremothers might have.

Not only that, I have theories about conspiracy theories. I believe that people take up beliefs that they're being lied to by the powers that be (whether those powers be political, military, legislative, clerical or – best of all – all of the above) for one of two reasons. Either their lives are so dull that they're prepared to stretch their individual and collective belief systems just to brighten up an otherwise dreary existence or they feel so angry about being left out of life's good stuff that they make up some outlandish theory to explain who's done them ill, and why.

We live in the Age of Information, and so have – thanks largely to the good old Internet – access to every wacko idea that's going down about the way the world works. There's a veritable cornucopia of Web sites with hypotheses about who's really in control, how they've stiffed the rest of us or a selected few of us (see my second theory about why people ascribe to such theories) and what we should be doing to correct the situation.

You may know a fellow named Robert Anton Wilson from his hilarious book *The Illuminatus! Trilogy*. In it, Wilson and his co-author Robert Shea roll together almost every conspiracy theory you've ever heard of (the Masons, the Bavarian Illuminati, Kennedy's assassination and the origins of Atlantis being only a few) into One Big Theory, add healthy dollops of sex, drugs and outrageous puns, and make a darn good story of it all. The trilogy was first published in 1975, but Wilson, being a hip kind of guy, now has his own Web site (www.rawilson.com/main.shtml). On it, you'll find all kinds of subversive good stuff to get you thinking about who's jiving who in these troubling times. (Hint: Wilson, who's an American, refers to the Bush administration as "The Tsarist Occupation Government.")

My favourite conspiracy theory these days belongs to a guy named David Icke. On his Web site (www.davidicke.com/icke), you'll find him touting his lecture appearances and the books he churns out. His best theory, I think, is that the planet is actually ruled by a race of intergalactic reptiles whose chief representative is Queen Elizabeth of England.

Not one to leave anyone out, Icke also maintains that George Bush, Donald Rumsfeld and Dick Cheney are also part of the lizard spawn who rule us. It sounds nutty, I know, but there are a lot of people who believe what this man says. Icke also tells us (without, it seems, contradicting the lizard theory) that the world is ruled by a group called The Round Table, which includes the UN, the Club of Rome, the Bilderberg Network and the Trilateral Commission. This secret society, says Icke, manipulates all the world's banking, politics, business and military affairs.

Wilson and Icke are pretty entertaining (though Wilson has a pretty obvious anarchist agenda). But there's a darker side to the weird world of conspiracy theories. Have a look at the William Cooper/Veritas News Service/Hour of the Time Web site (www.williamcooper.com). Cooper (who died in November 2001) represented a group of people who believe, among other things, that the CIA and Israel trained the folks who attacked the World Trade Centre on September 11, 2001. (Yes, you read the last sentence correctly.) Like all conspiracy theorists, he has woven a whole lot of disparate "facts" to prove his point. This is truly weird stuff – but gospel to those who believe.

My position on conspiracy theories? I think their fundamental flaw is that they presume levels of intelligence, resourcefulness and everyday competence on the part of the authorities that simply aren't there. You and I know that the world is screwed up because those in power are just dangerously muddled ordinary folks, blundering along from one crisis to the next.

Here's a better idea. Rather than accept someone else's conspiracy theory, why

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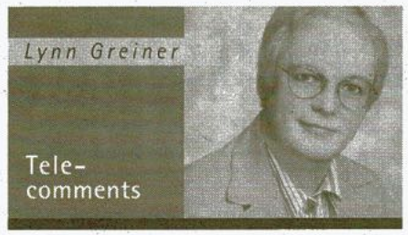

Fuel cells might add life to batteries

Anyone who wanders around with an electronic device in their pocket has the same concern in the back of their mind:

Will the blasted thing run out of juice when I'm in the middle of something critical? Will the battery survive this business trip, this meeting or even this afternoon?

Battery life has been a bugbear for equipment manufacturers since the first toy robot whirred to life. Some industries seem to be able to cope with it – cell phones, for example, have delightfully long battery lives – while with other devices, like some handhelds, you can watch the power indicator graph move steadily downward to zero in a few short hours.

One of the things that first attracted me to Palm, and later to RIM, was the fact that I only needed to charge the units once a week. That means no bulky chargers need accompany me on most business trips. It's a pity we can't do the same for laptop computers.

Sadly, battery technology isn't keeping up with the rest of the industry. Although individual computer components use less and less electricity, manufacturers keep piling on features that gobble up the savings (those 15-inch laptop displays may be sexy, but they're not energy efficient), or shrink the batteries to save space and weight.

The solution, say some, is fuel cells.

Fuel cells convert cheap, common substances – hydrogen and oxygen – into electrical energy, heat and water. There are several complex processes for accomplishing this, but the one used by manufacturers like Casio, who has developed a fuel cell to power its mobile products, relies on methanol. Hydrogen is extracted from the methanol and then the reaction proceeds, splitting the electrons from the hydrogen atoms and using them to generate a current.

Instead of recharging a fuel cell by plugging it in, you just add more hydrogen (the oxygen comes from the surrounding air). For portable devices, this will come in the form of a methanol cartridge about the size of a fountain pen's ink cartridge.

Reportedly, the fuel cell will have to be accompanied by a battery, because the fuel cells aren't good at accommodating the varying power needs of portable devices (the high draw when a hard drive spins up, for example, followed by a lower operating load). Batteries can cope with this variation, so fuel cells will charge the batteries, which will power the devices.

In theory, methanol has 40 to 60 times the energy efficiency of the lithium ion in our best batteries. However, experts suggest that the first fuel cell power sources will offer a five to one advantage over similar sized batteries; this could increase to 10 to 1 as the technology improves.

That's appealing. Imagine a laptop that would last a full day, or a handheld that needed refueling once a month.

There are, to be sure, a few obstacles to overcome along the way.

One is a basic question of fuel supply. Instead of simply plugging into an outlet to recharge a device, we'll need to carry some of those little methanol cartridges. To be practical, they'll have to be as readily available as batteries are today, and at least as cheap. It would, in fact, be better if the systems could charge either as they do now or from a fuel cell. That would cost a bit more in circuitry, but it would let us charge the machine when it's plugged in to save on methanol costs.

Another big issue is safety, both real and perceived. I have a feeling it will be an uphill battle persuading airlines that a bunch of devices run by a volatile substance like methanol are good things to have on a plane. We're not allowed to carry lighter fluid now – what makes vendors think that methanol cartridges will be permitted?

These are not questions to be answered tomorrow – the most optimistic estimates of availability place introduction of fuel cells for mobile devices sometime next year – but they do need to be answered. And if the answers are good ones, in a year or two the worry that a device's battery will die unexpectedly could be history. ◆

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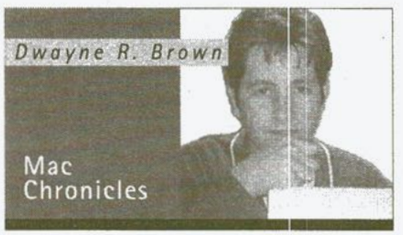
COLUMNS

More Apple polishing for spring



Last month, we looked at some general maintenance tools for your Mac. In the free category, we have Apple's Disk Utility and *MacJanitor* for general upkeep. Not so free, but affordable and worth the $200, is Symantec's *Norton SystemWorks* for major drive protection and correction. A bit cheaper, at US$70, is Alsoft's *DiskWarrior*, but it's still not native to OS X. And finally, a steal at US$50, is Aladdin's *Spring Cleaning*. It should also be noted that *DiskWarrior*, *Spring Cleaning* and *MacJanitor* are all available as downloads, so there's no excuse not to start a maintenance schedule today.

If you look closer at *SystemWorks* you'll find that among the titles included is the powerhouse *Norton AntiVirus*. Yes, it's true Mac users tend to suffer far less viral attacks than our PC counterparts, but that doesn't mean it can't happen. Use antivirus software. If not Norton then McAfee or Virex, which, by the way, is available as a free download when you have a .Mac account. This could be the single most important way to keep your computer healthy. One virus can undo all the maintenance in the world.

In the *Spring Cleaning* package from Aladdin, there are a series of cleaning applications. One of the more useful ones is iClean. This utility looks at your Internet cookies, cache and history folders. Items here not only take up valuable space on your hard drive, but they can be a security risk while you surf and contribute to slower speeds over time.

Speaking of speed – how is your Internet speed? Want to find out? Surf on over to www.dslreports.com/stest to find out. This site will do a little test and let you know how your connection fares. Try it a couple of times to get a better idea. Internet traffic at different times of the day will affect your speed. Next, head on over to www.enigmarelle.com and run the Broadband Optimizer. This little utility will do a few tweaks to optimize OS X and the underlying UNIX for a high-speed connection. It claims that it could double your speed. Under what circumstances I'm not sure. I found that I gained an extra 200kbps on the download and around an extra 20kbps on the upload. Not staggering, but still an improvement.

Another contributor to machine slowdown is the way programs and applications are installed and uninstalled. Even the best made operating system can become inundated with leftover bits of code, artifacts and just plain old junk. For starters, keep track of your own filing system. Don't leave your files scattered across the hard drive. OS X tries to help by setting up your files in the Home directory. Use this structure and you'll never lose sight of your important files and folders. When removing old programs, try using MacUninstaller, which comes with *Spring Cleaning*. Just dragging a program icon to the trash may leave remnants of the application in other places on your drive. MacUninstaller will find all links to the application and safely remove them. A clean drive is a happy drive.

Have you reached the limits of your hard drive? Thinking of upgrading? Before you toss or sell your old drive be sure to "zero the data." Not familiar with that term? Think of it this way – information is stored on a hard drive as ones and zeros. Binary data. Okay, you knew that already. Your stored information is found by using a table of contents that the drive builds each time new or updated data is written. When you erase a file, you're not actually erasing the data, you are simply erasing the information in the table of contents. The data is still there until the drive writes over it with something else.

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more INFO

MacJanitor can be found all over the Web with a Google search. Its author, Brian Hill, also answers many questions about *MacJanitor* in several online forums.

Norton SystemWorks For Macintosh 2.0 info can be found at www.symantec.ca.

Alsoft DiskWarrior info can be found at www.alsoft.com/diskwarrior/index.html.

Aladdin Spring Cleaning info can be found at www.aladdinsys.com/springcleaning.

Be sure to fully read the information for each piece of software, because when you start to work with disk utilities, unexpected results can occur if you're not careful.

McAfee gives Internet Security

By ALAN ZISMAN

There's Hertz and Avis, Pepsi and Coke, Mac OS and Windows. To these classic rivalries, add Symantec and Network Associates. Each wants you to think of their respective Norton and McAfee brands for all your computer's antivirus and security needs.

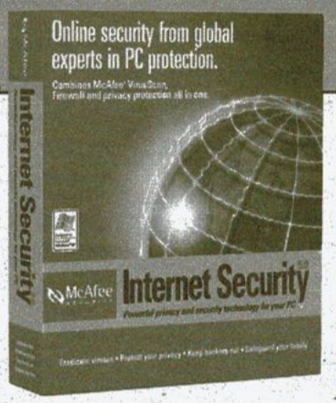
Symantec's *Norton Internet Security 2003* (*NIS*) suite bundles *Norton Antivirus* with a firewall, throwing in parental control features and spam filters. Like Symantec's *NIS*, Network Associates' *McAfee Internet Security 5.0* (*MIS*) suite bundles a variety of McAfee applications otherwise available separately.

No home PC should be without virus protection. *MIS* includes *McAfee VirusScan Home Edition 7*, which does a good job of scanning e-mail both coming and going. This new version supports all standard POP3 e-mail programs, not just *Outlook* (as in earlier McAfee versions). Also in the package: *McAfee Firewall 4.0* and a toolbox of useful tools, including a Web ad blocker, cookie filter, browser history cleaner and parental controls. More features and more advanced controls, in fact, than Symantec's suite, but also sometimes harder to use.

Setup does a good job of installing the various components and getting a user up and running, with one curious omission: The firewall is turned off by default. Unless a user knows to manually turn it on, much of the potential protection from this suite will be lost.

Once turned on, a wizard does a good job of helping to configure the firewall, identifying installed programs that might want to access the Internet or local area network. As with many other software firewalls, be prepared for a couple of days of having the software frequently asking you whether you're prepared to allow various programs permission to use the Net – and be prepared for some surprises regarding which programs want to go online. Like a firm but loving parent, you should be prepared to say "No" to your software now and then.

Besides letting you be firm with your software, the program's parental control features let you block applications, chat, instant messaging or even individual newsgroups for some users while allowing them for others, giving you control over how your children use the Net.



As with Norton's suite, you can list data-strings such as portions of your bank account or credit card numbers so that the program can warn you if something attempts to send these numbers across the Net without your knowledge. However, the interface makes it difficult to remove or edit these numbers if needed. Data files can be encrypted for added protection.

An Internet Security Check scans your system for potential security problems: Out-of-date Internet software, installed spyware or secretly-installed monitoring software. As with other Web ad blockers, users can sometimes find that linked pages fail to open; in that case, click the link again, this time holding down the Ctrl key. A window informs you of the number of cookies, ads, Web bugs and pop-ups that have been blocked.

A limited edition of McAfee's *QuickClean* application cleans out your browser cache and history, along with removing deleted *Outlook Express* e-mail messages, temporary files and other unwanted but persistent data and files. Its Uninstaller feature can clean remnants left behind with Windows' own Add/Remove Programs control panel. As well, *QuickClean* can search and remove spyware and adware programs.

By downloading a bunch of applications (*Zone Alarm* firewall, *AdAware*, an antivirus program and more), you could duplicate most of its features, but the convenience of a single install and a single interface make this worthwhile. Just don't forget to turn on the firewall. ◆

more INFO

McAfee Internet Security 5.0
$97.99
Network Associates
www.mcafee-at-home.com

Requirements:
Windows 98 or later; 32 MB RAM, 71 MB drive space.

Downloadable trial version available.

Getting video from drive to disc

continued from page 18

Burn

Burning – the act of recording the authored program to a blank disc – is the final step. Audio and video must be in the appropriate MPEG format, with file sizes and bitrates suitable for the target media and playback device. If the capturing, encoding and authoring have gone smoothly, burning can be as simple as pressing "Record."

The biggest problem to be concerned about here is compatibility. There are a handful of DVD formats out there, and even a few different CD specifications. Not all discs work on all players, whether they're computer drives or set-top devices. It's best to know your own requirements and playback environment before burning a disc, or you'll find it's only useful as a coaster.

Just before burning (or at the authoring stage), you can add CD playback and auto-play programs, as well as adding or removing region codes and zone locks on DVDs.

Choosing a disc

Now that we've covered the basics, it's time to choose the disc that's best for your needs. If you are familiar with an audio CD, you already know what VCDs and DVDs look like.

Video CDs (VCDs) play on computers with VCD playback software and on most DVD machines. The video quality is limited – at best equivalent to VHS – and usually delivered in a small window. It is possible to use menus and chapters on a VCD.

VCDs hold about an hour of video material; some programs will encode MPEG-2, a higher quality image, to CD, but only about 15 minutes of full-screen material will fit.

SuperVideo CDs (SVCDs) deliver a larger video window at a quality similar to SVHS. Two stereo audio tracks and four subtitles can be added. Menus and chapters stops are supported. SVCD handles about 40 minutes of video.

An SVCD can be played on many standalone DVD players and on all computers with a DVD-ROM or CD-ROM drive, with the help of a software-based decoder/player.

Digital Versatile Discs (DVDs) can be single- or double-sided, and have a much greater storage capacity. Upwards of two hours of high-quality video, at full screen size, and several tracks of either Dolby Digital or 5.1 Surround Sound fit on a DVD – depending on the encoding used.

DVDs support hot button navigation and motion menus, chapters, multiple languages, subtitles and video tracks as well as slide shows, Web links and more.

There are several competing DVD formats, and more on the way. They have similar capacities and features, but are best suited for different storage purposes and delivery environments. Check out DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM and now DVD-VR to determine the best format for you. ◆

The World Is My Cubicle

continued from page 22

not make up one? Go to the Turn Left site (www.cjnetworks.com/~cubsfan/conspiracy.html), fill in the online form, press the "Tell me more" button and you'll have a conspiracy theory all your own. And, if the real world isn't doing enough for you, you can base the rest of your life on it.

Alan Thwaits, a *TC!* Contributing Editor can be reached at praxis@pathcom.com. ◆

Mac Chronicles

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Anybody with a bit of knowledge about hard drive recovery can read that information still on your hard drive. Scary eh? Apple has built a neat utility that will turn all the binary data on your hard drive into zeros. Your hard drive will basically be digitally blank. This is not some cool parlour trick to hide data from your friends. This will really, really erase your hard drive completely and irretrievably. If you want more information on how to do this, check out AppleCare Document 107437 at www.apple.com/support.

Finally, one of the best ways to maintain your computer is through your own knowledge. Read up on hard drive and operating system maintenance. The AppleCare documents can be an invaluable source. Just type "OS X maintenance" into the search bar and start browsing. Also, there are several good books available from O'Reilly Books (www.mac.oreilly.com) in easy to understand English. Most of them are pocket books and do not require reading from front to back.

Happy computing! ◆

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FEATURE

Using video for self-promotion

continued from page 16

"I think I'll be reaping the benefits for some years as they get passed around," Simmons says.

Standing out from the resumé pile

Because digital video has the advantage of giving people an instant glimpse of a person, companies that help people find work are looking at video as a way of making potential employers take notice of their client's skills and abilities. Since 2001, Ottawa-based HireTopTalent Inc. has been creating VideoHandshakes, one-and-a-half minute self promotion QuickTime videos that can be sent to potential employers on CD or downloaded from www.hiretoptalent.com.

Impressions matter, and a strong first impression could very well help someone get that first interview.

"Right now the biggest problem for people who are seeking employment is that this is very much a buyer's market," says Toby Shannan, president and CEO of HireTopTalent. "There are lots of candidates out there vying for the same job. I've heard of corporations posting a job and getting 600 responses, and almost all are resumés. We were looking for a way to help candidates differentiate themselves and we thought video was a natural fit."

The cost to do a VideoHandshake is $299, and it is shot by HireTopTalent in order to make it as professional looking as possible. In many ways, the VideoHandshake is like the presentation a candidate would give during an interview.

It highlights their skills and strengths and lets a potential employer see right away what kind of person is behind the name on a resume. Impressions matter, and a strong first impression could very well help someone get that first interview.

As well, because the video can be downloaded, Shannan says it is not uncommon for people who receive a resume by e-mail to click on the hotlink to the video right away. ◆

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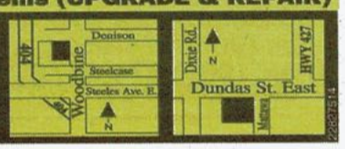

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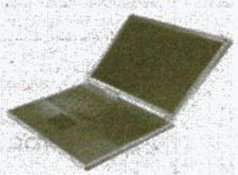

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Inexpensive recording with a Walkman

By DAVE CHAPPELLE

The latest Walkman incarnation is the MiniDisc recorder. Capable of digital recording and playback, it's for recording and transferring audio files to and from your computer. We looked at the top-of-the-line MZ-N707.

Recording MP3s for personal use on your computer and your Walkman is easy. Using the *OpenMG Jukebox* software, you can assemble groups of tunes from your audio CDs and hard drive, and record them for listening on the portable Walkman.

Even if you've never used one before, it won't take you long to master this recorder. Controls are similar to those on any cassette tape, MP3 or video player. The five-way switch handles most of the functions, and the inputs are well marked. The headphones have a remote control unit built into the cord.

We wanted to see if a three-piece (guitar, bass, drums) basement band could use this device to successfully record a CD with listenable sound quality.

We started with two professional-quality low-impedance mikes, each with XLR three-conductor connectors. We used XLR to 1/4 inch cables. We inserted the 1/4 inch mike cable plugs into an adapter that converts two 1/4 inch inputs to one 1/8-inch stereo output. We plugged the adapter into the MZ-N707's 1/8-inch input, and voila! – two-input live-off-the-floor recording.

At 8.1x7.1x3 cm and 133 g, portability has to be the number one advantage of the MZ-N707. The number two advantage is that the sound quality is extremely good. No noticeable hiss, hum or background noise emanates from this unit, but low quality cables will introduce noise.

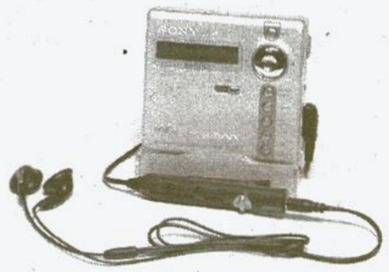
Recorded tunes are transferred via a stereo 1/8-inch to 1/8-inch cable, similar to those used with sound cards everywhere. But one wasn't included with our sample, although optical and USB cables were. Also included in our sample were two carrying cases, an adapter for using the 707 with a cassette tape player, a rechargeable AA battery, a 12-volt DC car charger and a 110-volt AC charging dock.

Disadvantages of the 707 arose when we finished recording and were ready to transfer the recorded music to a computer, in this case a newer iMac. While the 707 records digitally, it transfers only in analogue. The transfer cannot be "dumped" like a digital file. You must "play" each track while connected to the computer.

We hadn't expected to encounter difficulty locating blank recordable MiniDiscs. The local electronics stores were sold out and surprisingly, despite selling all kinds of other media, the business supply stores don't stock them. We eventually borrowed one.

So how did the results sound? Pretty good. After listening through the headphones, we tried the cassette tape adapter to play the unequalized tracks through a typical stereo system. Once transferred to the iMac and manipulated by someone who knows how, the tracks sounded great.

If your ear is trained and you are a slave to tone, hearing the results of recording live into two mikes will make you want to spend money on a mixer, more microphones, recording software and a Mac or expensive PC with high-end sound card. No question, your sound will be superior. But you'll be lugging around lots of gear, your bank account will be decimated and only a



minority of listeners (a few musicians and audiophiles) will be able to tell the difference.

The experience of the test crew aside, we proved that if you are on a budget, and are willing to spend time instead of money, you too could record a live band in your basement on a portable MiniDisc recorder. ◆

more INFO

MZ-N707 Walkman
$399
Sony
www.sonystyle.ca

***OpenMG Jukebox* Requirements:**
Windows 98/ME/2000/XP

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Familiar tool helps video editors go digital

By ANDREW MOORE-CRISPIN

Anyone who has been editing video for a while is likely familiar with analogue tape editing,using a source and destination VTR, connected through an editing console.

In fact, the process of searching source material and cueing up in and out marks using a jog/shuttle wheel becomes something of an ingrained process, making the switch from analogue to digital a difficult one. Going from the two VTR editing suite setup to an all-in-one interface, using mouse and keyboard commands, forces video aficionados to re-learn much of what they already know.

Contour A/V Solutions has a product that successfully bridges the digital divide in video editing, making the switch a less daunting process, blending the traditional analogue video editing feel with the superior power and relative inexpensiveness of PC video editing.

The Contour A/V ShuttlePRO is a USB controller that blurs the lines between analogue and digital editing by bringing the tactile feeling of a jog/shuttle wheel and one-touch mark in/out buttons to PC video editing.

The ShuttlePRO is fully customizable and will work with any application (whether a video application or not) where users might deem it useful. Customizing the peripheral is a tedious process, as there are nine buttons on the unit and 14 points of sensitivity (seven reverse and seven forward) on the shuttle wheel. To truly customize the ShuttlePRO, users will have to open their favourite video editing application to determine the keyboard functions they want the unit to perform, then program and label all the buttons accordingly. The buttons come with clear removable caps, and a sheet of cutouts for the most common video editing functions is included in the box, or can be downloaded from the Contour A/V Solutions Web site (www.contouravs.com).

Ten common video and audio editing applications are pre-configured, which means that users need only place the appropriate button labels on the ShuttlePRO to get started. Most of the pre-configured settings are for Sonic Foundry (*Acid*, *Vegas*), Adobe (*Premiere*, *After Effects*) and MediaStudio (*MediaStudio Pro*) programs.

Once a custom profile has been created or one of the pre-configured ones is chosen, the ShuttlePRO software associates itself with the editing application executable, then loads up and selects the appropriate profile whenever the video application is started, which makes using the peripheral more seamless.

Anyone that has edited video on an analogue setup will find it easy to jump in and start making simple edits using the controller.

While all the controls for simple video editing are included on the ShuttlePRO, it can't be counted as a replacement for the keyboard and mouse. Only the most basic functions are covered on the face of the unit; no transition effects or other tools could realistically be worked onto the face of the unit without creating a jumbled mess. Also, even the convenience of having a jog/shuttle wheel can't rival the speed of using the mouse to control a slider for fast video searching.

As an added bonus, the peripheral could also theoretically be set up as a paddle wheel controller for playing *Arkanoid*, *Pong* or any their freeware clones. ◆

more INFO

ShuttlePRO
$190 (from US$125)
Contour A/V Solutions
www.contouravs.com

CanadaSys(Retail Division)
EverChannel(Wholesale)
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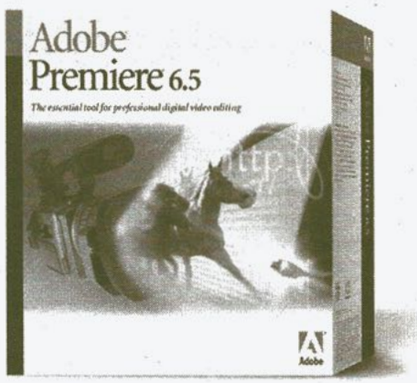
What's new in *Adobe Premiere*?



By LEE RICKWOOD

The latest version of Adobe's nonlinear video editing software, *Premiere 6.5*, is powerful and comprehensive.

That's both good news and bad.

It's good Adobe has added a powerful titling tool. Good an MPEG encoder has been added. New audio capabilities and real-time previews are now supported in an already loaded package.

So what's bad about that? Well, some of *Premiere*'s best features are dependant on computer power and may not function well without changes or upgrades to your current system. *Premiere* is still somewhat particular about installs; pre-existing hardware or software drivers can cause problems.

If you're familiar with previous *Premiere* versions (back to 5.0) this package is worth your consideration. If you are brand new to nonlinear editing it may offer too much for your needs.

Get started cleanly

Premiere 6.5 wants to go into a clean system, ahead of any other associated hardware (real-time cards such as Canopus DVStorm2 or Matrox RTX boards) and without graphics acceleration. Graphics cards should be limited to 16-bit colour display, lest they steal resources from the CPU, resulting in dropped frames or other hiccups.

It's also important that presets from the capture card you're using be loaded as the editing mode presets. Without a proper match (compression settings, bit rate, frame rate and size, etc.) the card may not output to tape. Fortunately, *Premiere 6.5* has a View Settings option to match presets correctly.

Premiere, like other programs, has specific requirements for capturing video. Compatibility among operating system, application software, FireWire/1394 hardware, and camcorder is important. DV interfaces should comply with the Open Host Controller Interface (OHCI) standard.

Premiere 6.5 handles this with its DV Device Control Options menu, to specify camcorder manufacturers and models. A click on the Check Status button verifies the connection.

Timely features added

Real-time previews are a great time-saver for busy editors. It's a handy way to check transitions and special effects before committing to them.

The new real-time preview requires specific hardware to work fully – for PCs, Pentium 4 processors and at least 256 MB RAM do best. According to Adobe, *Premiere* supports all its effects and transitions for real-time previews, but it's dependent on system resources. As the manual says, images "degrade gracefully" without the needed horsepower (slower frame rates, skipping audio, etc).

Latest word in titling

One of *Premiere*'s best enhancements is the titling capability. Gone is the old titler (from back in version 4). New is Title Designer, and lots of customizable templates and designer fonts.

It's a little intimidating if you're not familiar with other Adobe programs, but if you know *Photoshop* or *Illustrator*, Title Designer itself is worth the upgrade in the eye of many editors.

Font colour, shadows, outlines and spacing are easily adjusted and saved for future use. Users can add texture and sheen, or create text on a path. Rolls and crawls can be used as well. Other title motion effects are made using *Premiere*'s other editing functions and effects.

Sounds like disc-o dancing

For many, the most important upgrade in *Premiere 6.5* is the MPEG encoder, supplied by Main Concept. Together with bundled DVD creation software (Sonic's *DVDit! LE*), *Premiere* is a solid disc making, as well as video editing, tool.

The encoding functions are straightforward, but more importantly, give good results. The encoded image can be quite good, and the time needed to encode not that lengthy (depending on the complexity of your program, anticipate about 1.5:1 encoding times). For truly professional authoring, the tools in *Premiere* may not be enough – chapter points, embedded Web links and other elaborate DVD features are not always accessible. But for simple DVDs and menus, *Premiere* now does it all – as long as you have a disc burner (it outputs video for VCD and SVCD, as well).

Premiere also has enhanced music mixing and soundtrack creation capabilities. Also handy for sound manipulation are new audio filters, such as the three-band parametric-equalizer.

Choose the best tool

Adobe Premiere is an established and robust package, with lots of useful editorial features and new enhancements for experienced video editors. There are other, less demanding ways to get started. But if you're comfortable with 6.0, you should have this upgrade, if only for the titling and encoding tools. ◆

Premiere help online

Including Adobe's own training and support network, there are hundreds of Web sites with information about *Premiere*, among them:

www.dvshop.ca/dvcafe/adobeprem.html

www.ledet.com/coolstuff/software/premiere/

www.wrigleyvideo.com/videotutorial/index.htm

www.unforgettable-events.com/premiere.html

www.stevengotz.com/premiere.htm

more INFO

Premiere 6.5
$979 (full version), $259 (upgrade)
Adobe
www.adobe.com

Requirements:
Pentium III 500 MHz processor (Pentium 4 or multiprocessor recommended), Windows 98SE/ME/2000 (Service Pack 2)/XP, 128 MB of RAM (256 MB recommended), 600 MB of available hard-disk space, 256-colour video display adapter, CD-ROM drive, *QuickTime 5.0* recommended
For DV: Microsoft DirectX certified IEEE 1394 interface, dedicated large-capacity 7200 RPM UDMA 66 IDE or SCSI hard disk or disk array, and DirectX compatible video display adapter
For third-party capture cards: *Adobe Premiere* certified capture card
For Real-Time Preview: Pentium III 800 MHz processor (Pentium 4 dual processors recommended)

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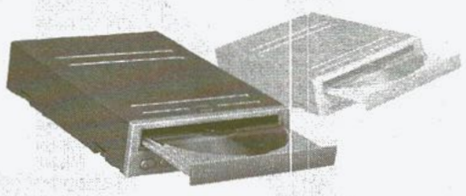

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Digital Shots: Taking a fieldtrip

By ANDREW MOORE-CRISPIN

Spring is in the air and summer will soon be upon us. Unless you're the type that particularly enjoys going out in the freezing cold of winter to capture some wintertime scenes, you probably haven't taken too many outdoor pictures since going into hibernation mode.

Photography is a great hobby, as it can work itself into other interests; anything you find enjoyable is worthy of being captured as a digital photo.

In the spring, we start coming out of houses, bleary eyed and blinking at the sun, to start pursuing warm weather hobbies. Whatever your hobbies – hiking, camping, rock climbing, weekend sports or just walking around the city – take a digital camera with you and shoot away. Once you've purchased a digital camera and storage media, taking pictures is cheap, unlike film where every exposure has a cost associated with it.

Photography in its most basic sense is very simple indeed. The shutter opens for a set amount of time, depending on the brightness of a scene and on how open the aperture is. Where it gets a bit more complicated is in trying to figure out the best way to capture the available light. Should we go with a smaller aperture and resulting slower shutter speed and get into stability issues – requiring, at best, steady hands and at worst, a tripod? Or, do we go with a larger aperture and corresponding faster shutter speed at a sacrifice to depth of field?

Depth of field is the amount of the scene behind and in front of the central subject that is in focus. The wider the aperture, the smaller the depth of field, hence, less of the scene will be in focus.

This information can be used to get the results you're looking for in your pictures. If you want to frame and capture an entire scene, making your picture as accurate a representation of the actual scene as possible, keeping everything in focus is important. A smaller aperture and slower shutter speed will accomplish this.

On the other hand, if you want to draw attention to one particular object of interest in the whole scene, using a larger aperture and adjusting the shutter speed accordingly, then focusing on the central object will throw everything else out of focus to varying degrees. It's a good way to steer the eye through the scene the way you want it to go, drawing attention to the elements you want noticed, and it can make for powerful and appealing photographs.

There is a rule in manual film photography called the Sunny 16 rule, which essentially states that on a sunny day, whether shooting with or without a flash, photographers can set their aperture size to f16 and shutter speed to the approximate speed of the film (ie. 1/125 sec for film of 100 ISO) to turn their manual camera into a point-and-shoot, more or less. Rather than fiddling with settings to get the perfect shot, the Sunny 16 rule gets rid of all of the f-stop and shutter speed worries and allows photographers to pay attention to the actual scene.

Digital cameras without access to shutter speed and aperture settings usually give users few options in the form of different shooting modes. Rather than confuse matters with shutter speed and f-stop numbers, some manufacturers go with four or five shooting modes, represented by familiar icons like the running man for action, a sun partially covered with a cloud for shooting on an overcast day, a sun for bright scenes, a person for portrait mode and others. These settings, as inflexible as they are, do lend some flexibility to your digital camera, and the iconic representation of the type of shot each mode is meant for gives hints as to the shutter speed and aperture the setting uses. This means that even using a point-and-shoot camera with little flexibility, users can alter the way the picture is taken.

The running man icon represents fast action; to catch and freeze fast action, the camera needs to use a fast shutter speed, which means a wider aperture to allow as much light in as possible. This results in a smaller depth of field.

Portrait mode would be for a still subject and would, as a result, use a slower shutter speed and a wider aperature in favour of more depth of field.

Even using these two options and the degrees in between represented by the other icons, budding shutterbugs can experiment with depth of field to give their pictures more, well, depth.

More important, perhaps, is the thought that since those knowledgeable in film photography invented a rule to turn an advanced SLR into a point-and-shoot camera; we shouldn't think about these things so much as just go out there and shoot pictures. ◆

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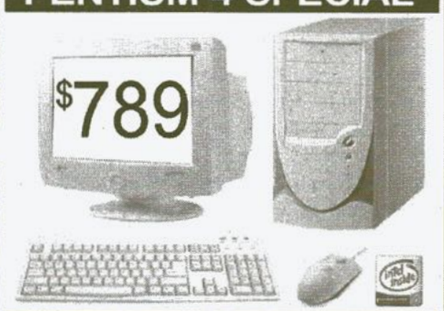

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Digital Words: Get extra work out of layout software

By JEFF CHAPMAN

Sometimes people force software to do things it really has no interest in doing. Having mastered one program's interface, people are reluctant to teach themselves another, so they do their best to persuade *Microsoft Works* to format a newsletter, *CorelDraw* to word process a document or *Adobe Photoshop* to create line art.

While it's usually humanly possible to force programs to obey even one's most diabolical commands, software works best when you let it be itself and do what it was designed to do. Word processors should primarily be used for processing words. Page layout software should be used for laying out pages. Illustration programs should be used for making illustrations.

That said, however, there will always be those odd times when you just want to make a few simple tweaks to a document after you've already pulled in text and graphics created with other software, and page layout packages have become increasingly accommodating in this department.

Have your words and illustrations too

In the early days of desktop publishing, back when *QuarkXPress*'s rivals were *Corel Ventura* and *Aldus PageMaker* (and the cruel joke that is *Microsoft Publisher* had not yet been unleashed upon the world), page layout was primitive at best. *Ventura* lacked even a rudimentary text editor: If you spotted a typo on a page layout in *Ventura*, you loaded the original text file into your word processing program, made the correction and then reimported the text into *Ventura*. Similarly, programs could display illustrations designed in other programs, but couldn't draw anything more complex than a basic oval, rectangle or straight line. A triangle ... well, a triangle was just an impossible dream.

Fortunately, a few brave graphic designers clung to that dream, and today the situation is much improved. The latest versions of *Adobe InDesign* and *QuarkXPress* both feature respectable word processing functions, and their capabilities to create vector graphics have improved by leaps and bounds. While neither program offers anywhere near the type of control one can get in *CorelDraw* or *Adobe Illustrator*, they do get the job done. Either program lets users draw and edit complex polygons and freeform shapes, including both straight lines and Bézier curves, in addition to the much-beloved ovals and rectangles of old. While these shapes can be filled with images or text as always, they can also be painted with a wide variety of fills and complex gradients. Text can also be commanded to run around shapes or follow twisty paths.

Users familiar with traditional illustration programs such as *CorelDraw* and *Adobe Illustrator* will find the technique for drawing in *Adobe InDesign* to be familiar and straightforward. A pen tool – one of the main tools on the toolbar – lets users lay down a series of anchor points to fashion a path of straight lines and smooth curves. The user clicks and releases the mouse button to connect two points with a straight line segment, or clicks and drags to create a curved line segment. If a shape's endpoints are connected, *InDesign* will treat it as a solid shape; if not, the program will assume it to be a line.

Quark's approach to creating illustrations is less intuitive, or at least less familiar. While *XPress* relies on many of the same anchor-point-and-direction-line drawing principles as the Adobe software, it doesn't have a pen tool. Whereas *InDesign* lets the user create a shape with a single tool and then decide what to do with it, *XPress* features four separate Bézier drawing tools, one for each possible use: Text box, picture box, line and text path. It's possible (though awkward) to convert a text box into a picture box or a line into a text path, but trying to connect two endpoints in a line or text path only bewilders poor *XPress*. *XPress* can rotate and resize lines and shapes, but it isn't built for the job, and handles it nowhere nearly as comfortably as the Adobe software.

While users can probably get away with using *XPress* for most of their drawing needs, it's not what the program was built to do, and you'll often have to know about an obscure submenu or an arcane shortcut key in order to bend it to your will. *InDesign* is friendlier in this regard, but it's still not designed to be an illustration program. Using *Illustrator* and *InDesign* together is probably the best match of all for illustration-heavy desktop publishing: users can simply cut and paste drawings made in *Illustrator* directly into *InDesign* and vice versa. ◆

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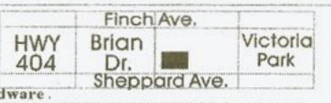

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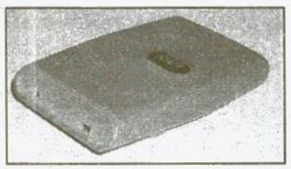

By NESTOR GULA

Backing up data regularly is a good habit that is easy to let lapse. It is left off for the next day or for when we have some extra time – which never seems to happen. So the easier and quicker the process can be made, the more likely it is to be checked off the "to do" list. With this in mind, CMS Peripherals, Inc. has introduced a line of external hard disks that are designed for the backup of computers.

Called the Automatic Backup System, or ABSplus, the units are a sleek silver colour and come in sizes of 20, 30, 40 and 60 GB. Once you have installed the software and connected the ABSplus to your computer (I tested the USB 2.0 version; a FireWire, or IEEE 1394, version is also available), the unit automatically makes a complete backup of all your files, applications, operating system and settings. You can use this backup for disaster recovery because the ABSplus becomes a bootable external hard disk.

After your first session with this unit, all you need to do to back up is to plug the unit in. The ABSplus searches your hard drive and backs up only those files that have been modified or newly created. This obviously takes less time than backing up the whole hard drive.

I use the ABSplus for other things as well – I transfer large files from one computer to another. The USB 2.0 connection makes this procedure rather quick.

The ABSplus is a nice unit for those that need to back up their data. Thankfully, I have not had to test the disaster recovery features of this device. It just goes to show that if you have things backed up, nothing horrible happens – it is only when you don't have a backup that your system fails. ◆

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Adventures in Digital Video: DV, by any other name ...

By LEE RICKWOOD

"The problem with video is that it gives you a thousand possibilities not covered by the rules."

–Lars von Triers, November 1999

It is both the problem, and the opportunity, as von Triers would find out.

Video-makers know von Triers as the Cannes award-winning founder of the Dogme movement. Conceived in the mid 1990's as a "new wave" in filmmaking, Dogme embraced the freedom and possibility created by emerging digital video production equipment.

Yet it had its own set of rules – Rules of Chastity – that forbade tried-and-true filmmaking techniques and technologies. No sound added after the fact. No extra lighting beyond available ambient. No filters or other camera accessories. No credit for the director.

Yes, digital video has created some fascinating possibilities. But the Dogme movement suffered under its own dogma, and is now for all intents and purposes disenfranchised. Even von Triers admitted "breaking the rules."

But digital video has another set of rules – not creative, but technical. They help differentiate between "digital video" as a generic term of reference in the consumer marketplace and "Digital Video" as a specific and approved media format. Otherwise, people assume digital video is responsible for things it may not be possible to do.

As one example, the marvelous Canadian film, *Atanarjuat (The Fast Runner)*. This groundbreaking Inuit film was praised for its remarkable imagery, shot on digital video.

Actually, cinematographer Norman Cohn shot using Digital Betacam, a high-end digital camcorder made by Sony. His video was then transferred to film for theatrical presentation.

Digital Betacam, while both "digital" and "video" is not Digital Video, or DV.

DV is a highly compressed video format – functional, economical, easily watchable but highly compressed. DV takes raw imagery and squeezes it down by a factor of five to one; Digital Betacam compresses at three to one. DV drops about half its chrominance (colour) information when compared to luminance (brightness) and is known as 4:1:1. Other formats are 4:2:2.

There are some 18 different video picture formats, each suited to a specific purpose. Twelve formats use 480 lines of resolution, with different picture widths and different scanning techniques; these are standard TV (SDTV) formats. The remaining use 720 or 1,080 lines of resolution, either progressive or interlaced. This is true high definition TV (HDTV) – digital video at its finest.

Only four of the 18 formats are commonly used by broadcasters: 480i, 480p, 720p and 1080i (and only one in Canada with a 1080i signal – Citytv).

But more and more digital video camcorders – readily available to consumer and prosumer users – can deliver more than one of these different formats. In the market today are progressive scanning cameras, interlaced cameras, selectable frame rate cameras, 480, 720 and 1,080 line cameras.

Without a doubt, these are great tools for the creative, adventurous videographer. But understanding what the rules are, what the formats are and more to the point, how they can be best produced, distributed and viewed, is critical to successful production of any kind.

And that's no dogma. ◆

more INFO

A good FAQ on High Definition Television standards
www.110220volts.com/FAQ/FAQonHDTV1.htm

A Canadian industry site on digital television developments
www.cdtv.ca

A Dogme site, with rules, resources and film samples
www.dogme95.dk

A U.S. commercial site on DV technologies and techniques
www.dvformat.com/htm/HomeSet1.htm

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Musical Odyssey: Instruments galore

By NESTOR GULA

In the past few instalments of the Musical Odyssey, I have outlined basic techniques for recording bass, guitar, drums, keyboard and vocals. Although these instruments form the basis of a rock/pop sound, they are by no means the only instruments you should be recording. Your music will usually take on a more complete quality if you add interesting sounds to it. It is very easy to overdo it by adding too many sounds and effects to a song, but done just right, the effect will be magical. I guess that's why great music producers are in such high demand.

It is very easy to overdo it by adding too many sounds and effects to a song, but done just right, the effect will be magical.

This musical colour can be added in one of two ways. The electronic solution would be to use your synthesizer or computer's General MIDI sounds, which will emulate most instruments that are out there. This is a passable solution, although the sound you get will be relatively generic. If your synthesizer has great sounds, or you have a really good soft synth on your computer this will be better, but the best solution is to always record the instrument itself. If you want a violin sound, record a violin.

There are no hard and fast rules for recording various instruments. Part of the joy of fooling around in a home studio is trying to get a specific type of sound out of an instrument. Quite often you will discover new sounds by accident, stemming from different microphone placement, using multiple microphones and a myriad of other factors.

The one drawback you will encounter is the noise from your computer's fan. The instruments will all be acoustic, so a quiet recording environment is essential. Investing in a couple of long cables to put the microphones in a room away from the computer will usually do the trick. Because you are recording this on a computer, you have a bit more flexibility when recording – you can hit record on your computer, amble over to the next room at a leisurely pace, pick up the instrument of choice, record as many takes of the passage as you want and then select the best take and place it where it needs to go.

The key to recording is always experimentation – with microphones, rooms, etc. You might find that the best sound for a particular instrument, for a specific song, is playing it at one end of a long hallway while the microphone is at the other end. Jim Morrison of The Doors recorded a bunch of vocal tracks for the final Doors album in a bathroom because the acoustics and the vibe were just right.

continued on page 50

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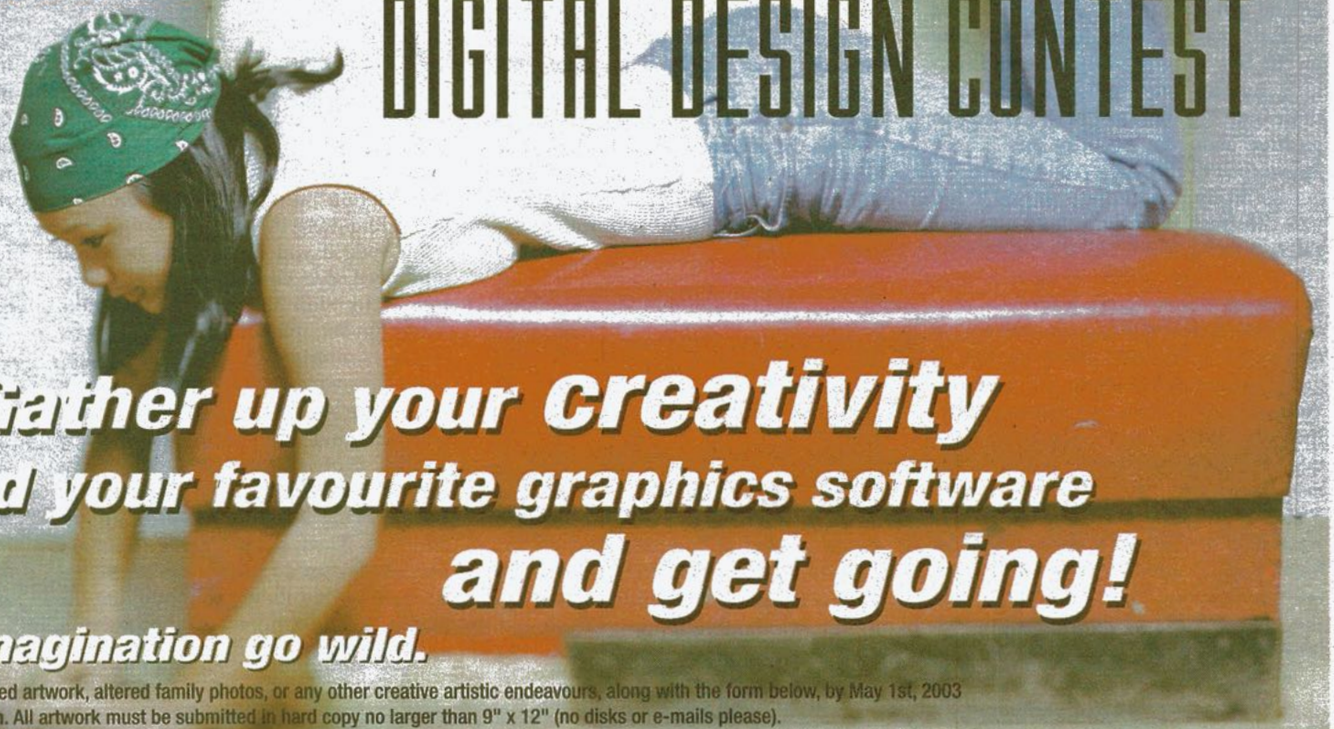

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Let your imagination go wild.

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TCI's 6th Annual digital design contest Entry Form Deadline May 1st, 2003

Name:.....
Address:.....
E-Mail:.....
Phone Number:.....
Age:.....

Occupation/school:.....
Title of Entry:.....
Hardware/Software used: .....
.....

NO DISK OR E-MAIL ENTRIES.

Contest Rules: Prizes must be claimed by August 30, 03. Winners must provide valid identification upon claiming prize. The prizes awarded are not transferable and cannot be redeemed for cash. To enter and to be eligible to win, persons must be residents of Canada, and not employees or be domiciled with an employee of *Canada Computes!*, its affiliate companies, or advertising and promotional agencies. The winners will be selected by *Toronto Computes!* on May 09, 03 from among all eligible entries received on or before contest close date. Winners will be contacted by telephone or e-mail. In the event that they cannot be contacted within the first week following the contest another entrant will be selected. All entries become the property of *Toronto Computes!* and may be used in subsequent advertisements for the contest. All entries must submitted by their artist and must be original work.

Send your entries to: Toronto Computes!, Digital Design Contest, 625 Church Street, Suite 600, Toronto, ON, M4Y 2G1 Attn: Editor

Confront the backdoor: Trashing spyware

By HAROLD LASS

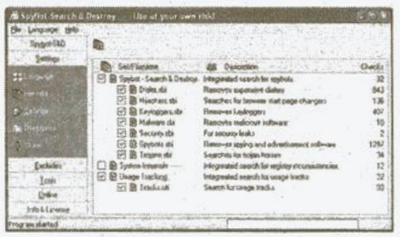
Do any of these programs sound familiar – Bulla, Gratisware, High Traffic, Enliven, Hitbox? I operate behind a firewall and a virus shield and believed that ought to do it for security on the Net. But after installing and running anti-spyware software, up came these and 23 other positives. I wasn't so positive about my security any longer. Spyware is everywhere. Your hard drive is most likely harbouring some of it, but you can trash these unwanted intruders safely and for free.

Spyware (also called adware) is programming clandestinely placed on your computer, usually when you download and install software – often for free. It gathers information about you based on Web sites you visit, for instance, and then relays that information to advertisers or other interested parties. The result? Spam.

Cookies are different. They aren't spyware. For one thing, you can disallow them, and for another, they can be useful, remembering login information and the appearance of your customized browser pages, for example. You can also trash cookies easily and quickly from within your browser at any time.

So, how do you get rid of spyware?

First you have to determine if you've been spied on. PepiMK Software's *SpyBot Search & Destroy* (spybot.eon.net.au) will tell you that. This free utility is simple to use and, what's even more important, remains up to date. Like a virus shield, the efficacy of this program is only as good as the accuracy of its database, and *SpyBot*'s database is easily updated from within the program. This ensures that your hard drive will be scanned for the latest intruders.



Once a scan is complete and all the spyware has been detected on your hard drive, a click on "Fix selected problems" brings relief. Before you trash the unwanted intruders though, you can request a description of any item chosen for deletion in case you're not sure about removing it.

But even if you do trash an item you may need, one comforting *SpyBot* feature is its "fail safe" restore function. After *SpyBot* removed all the spyware on my hard drive, all sorts of error messages greeted me during the next boot. One of my utilities apparently required a program that had been removed by *SpyBot*. Not all spyware, despite its stealth, is necessarily evil. This one was not. Clicking on Restore corrected the problem. Then I configured *SpyBot*'s Exclude feature to ignore this particular spyware during its search, removing the possibility of accidental deletion on subsequent scans.

Finding and trashing unwanted spyware on your hard drive is one thing, but it would be easier to shield your system from downloading these freeloaders in the first place. That's what *SpywareBlaster* (www.wilderssecurity.com/spywareblaster.html) is all about. Simply tell it what you don't want, and you won't get it. It's simple to use and effective. The software is free but a donation is requested. And its database, like *SpyBot*, is current. That's the problem with Lavasoft's *Ad-Aware* (lavasoft3.element5.com), a popular anti-spyware program that's been around for some time now. It's good, but the freeware version database hasn't been updated for months. Dangerous.

One last word. Spyware is not the only way spammers can hunt you down. By using robots and spiders – software that probes Web sites for information – spammers can harvest your e-mail address from any Web site on which it appears. If you have access to the site's HTML code, travel to NetMechanic (www.netmechanic.com/news/vol4/design_no21.htm) to learn how to code e-mail HTML so as to render it indecipherable to spiders.

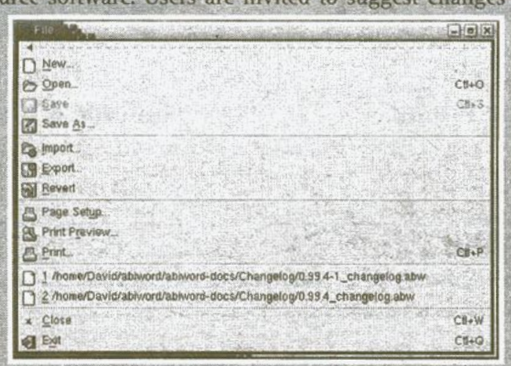
By the way, *SpyBot*, *SpywareBlaster* and *Ad-Aware* do arrive spyware-free. ◆

A word about *AbiWord*

By HAROLD LASS

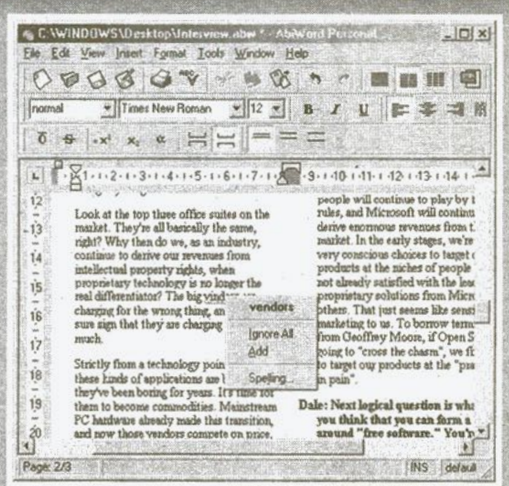
Imagine a word processor that's compatible with and looks, feels and performs a lot like *Microsoft Word*. Imagine that this word processor is also available cross-platform (Windows, Linux, Unix, even Mac – eventually), comes with a panorama of plug-ins and supports many languages. Then imagine this processor is free. Now, you can stop imagining. It's called *AbiWord* (www.abisource.com).

So why is it free when you have to pay for *Word* or *WordPerfect*? For one thing, *AbiWord* is a child of open source software. Users are invited to suggest changes they feel will improve the program. And because the source code is freely available, as many as 200 programmers have contributed to the code since 1998. Currently, about 20 people modify and update the program. And there are plans afoot to expand *AbiWord* into a full office suite.



For another, *AbiWord* isn't as robust as *Word*. Although it's capable of performing all of the essential word processing functions, including creating tables, it has difficulty assembling tables from files created by other word processors. Columns fair much better. And if you're a *WordPerfect* user, *AbiWord* can handle those documents as well.

But don't think of *AbiWord* as just another stripped down text editor. Just about anything you'd expect a good word processor to do, *AbiWord* does: cut, copy, paste, headers, footers, undo, redo, insert hyperlinks and pictures, bullets, columns, bold, underline, italics, superscript, subscript, spell check, word count, highlighting, save page as XHTML plus a whole lot more. If you're like me, these are just about the only functions you'd ever need. Why pay hundreds for word processing features you rarely, if ever, use?



AbiWord isn't the only freebie word processor out there. You might also want to check out *OpenOffice* (www.openoffice.org). *OpenOffice*, though, lacks the look and feel of *Word*.

Just a word of caution here: If you download and install *AbiWord* or *OpenOffice*, watch the install screens carefully. At one point, you'll be asked if you want to associate .doc or .rtf files with *AbiWord* or *OpenOffice*. If you opt for these associations, these programs will always open those documents when you click on them. To "unassociate" these file types, you'd have to edit the file associations manually, which can be a bit of a pain because there may be many file types involved.

At around 1 MB, *AbiWord* takes very little space, loads in a flash, and considering the price, it's worth a download. ◆

KIDS COMPUTE

Net guide to just what you're looking for

By MARA GULENS

I like Web site reviews – and not just because I'm a reviewer myself. Have a look at the Google search engine. Current number of searchable pages: 3,083,324,652, and climbing steadily. Think you can find what you need just by inputting the right search string? You might, but maybe not quickly enough for a child tugging at your shirt sleeve demanding a fun, educational and safe dot-com – now!

So it was with glee that I came upon a new book on the market, *Awesome Internet Sites for Kids*. The 155-page booklet is affiliated with the same people responsible for Smork.com – and is a catalogue of children's sites with a complementary Web version.

The contents page lists 38 categories – from Animals, to E-zines, to Languages, to Zoos. Each category is colour-coded and discusses three or more sites, for a total of nearly 300. Homework, for example, reviews rudimentsofwisdom.com,wordcentral.com, eduplace.com/kids, as well as a site with a rather long URL.

Which is where the unique aspect of the book comes in. Rather than have readers read about a neat site and then clumsily attempt to type the name on the computer, the authors have given each site their own URL, which you can link to from the Smork.com Web site. That long homework URL, for example, becomes www.HM8.smork.com. Ta-da: Wonder Korner.

There's also another way to do it. Go to Smork.com, choose the category you want (like Homework), and then number eight. Presto: You arrived at Wonder Korner through the back door.

One issue I've always had with Internet sites books is that they grow old so quickly. But with kids' sites this may not be as big an issue, and besides, while hundreds of new Web pages are launched each day, new quality sites don't pop up like bubbles anymore.

Nonetheless, we have to assume that if the book sells, the authors will be back with version two, which should address this point. They've also left 21 drop-down spots for each category, so there's still loads of space. (That said, don't be surprised if you click on a number and there's nothing there.)

As I looked through the book, I found many sites I've reviewed over the past three years, and many others I'm keen to visit. Best of all, *Awesome Internet Sites for Kids* puts kids' Web sites at my fingertips, which is much easier than looking through even a well-organized list of favourites.

Half the pages of the book sample content from the sites reviewed so that you get a taste for the Web without going online. The print version also includes ideas for safe surfing, suggestions on how to bookmark and too many reminders that the book is printed on recycled paper.

I do have one question though: What's the story with Smork? He's on the cover, he appears throughout the book and he heads up the site, but never once have we been formally introduced. ◆

more INFO

Awesome Internet Sites for Kids
By Sandra Antoniani and friends
$19.99
www.smork.com
Ages: 5 to 13

Withstanding time

By MARA GULENS

Occasionally, the game review process takes an unexpected turn. Although the reviewer has a stack of software and good intentions, nothing seems to fit the bill, as was the case when I sat down to review a title for this issue.

Surveying the stack of titles I wasn't ready to start conquering that particular morning made me ponder the fate of the many CD-ROMs that have made their way into our house by way of the review process. Many have initially been snapped up by eager, little computer player hands, and then have either been played again and again, or have been relegated to the "out-of-favour" stack.

Suffice to say the "played again and again" stack is very small.

I could go on about all the reasons the games failed, but it's probably more beneficial to mention why the top three games in our house have withstood the test of time. Since some of these titles are fairly ancient, you may even find them in the bargain bins.

JumpStart Baby
Knowledge Adventure
Ages 9 months to 24 months

This title has an original and deluxe version, and although it's intended for kids 9 to 24 months, there's something about the program that even senior-kindergarten kids can relate to. It could partially be because both versions pack so much into the content that kids don't get bored – games, colouring and the chance to dress teddy. But mainly, I think, it's because the game treats kids like humans, not couch potatoes who are satisfied with absent-mindedly clicking a key and watching shapes float by.

Little People Discovery Airport
Fisher Price
Ages 2 to 4

Little People Discovery Airport is a winner because there's no confusion. Sounds elementary, but not if you look at the many wacky ways games are designed these days. Kids can easily navigate between the mini games, change levels mid-game and return to sections they enjoyed. Little kids love animals, and this game gives them the chance to complete tasks and feed very real-looking cats and dogs.

JumpStart Artist
Knowledge Adventure
Ages 5 to 8

This title rewards kids with part of a different amusement park ride for successful completion of an art project – and kids like that. Not only that, successful completion of the entire park is a goal that keeps them playing. There's also a lot of variety and the chance to relate to a group of characters from the JumpStart world. ◆

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CyberPlay

Madonna – How not to treat your fans

By GEOFF MARTIN

It's understandable that musicians become upset when their new albums are posted on file-sharing networks in the form of MP3s shortly after they're released, or, in some cases, before their release dates. But it's not very cool to cuss out your fans when they're looking to download a preview track from your unreleased album, perhaps to see if they wish to pay for the whole enchilada.

That's the route Madonna has taken with potential music pirates of her latest album, American Life. On file-sharing networks such as Kazaa, fans who think they're downloading a version of her new songs are instead downloading a spoofed file that begins with a very menacing-sounding Madonna asking, "What the f*** do you think you're doing?" followed by several minutes of silence.

The tactic has had a curious effect, however, as there seems to be more interest from downloaders in finding the spoofed file containing her rant than there is in actually subjecting themselves to her music.

"This sucks," wrote one frustrated poster at the message board section of Zeropaid.com. "I just downloaded American Life and I got the real song."

Other fans looking to download the new tracks simply received loops from American Life's self-titled first single, proving conclusively that there's nothing like hearing a bad verse repeated 50 times over to make you realize how truly insipid the lyrics are. As if being sworn at wasn't enough, Madonna thought she'd stick it to her fans by forcing them to listen to her rapping the following beautiful prose over and over "I'm drinkin' a soy latte/I get a double shottay/It goes right through my bottay/And you know I'm satisfied."

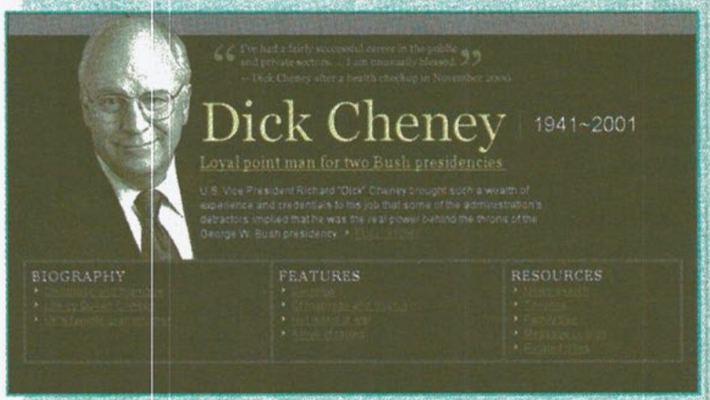
Oh, the humanity.

Instead of either berating her fans or subjecting them to a cruel form of musical Chinese water torture, perhaps Madonna should have taken a page from the book of the always affable Barenaked Ladies. Back in 2000, fans of our hometown band looking to download a pirated copy of their new single instead received a message from two of its members saying, "Although you thought you were downloading our new single, what you're actually downloading is an advertisement for our new album, Maroon. It comes out September 12, and, uh, after that point, I'm sure you can download lots of stuff from the new record. But until then, you can just get lots of stuff with us bugging you."

Readers who are interested in hearing the Madonna rant should really save themselves the potential emotional damage that can arise from stumbling upon the aforementioned loops (or the real songs) on a file-sharing network, and instead download a WAV file of the admonition here http//groups.yahoo.com/group/winoc/files/madonnafake.wav

In other news, the author wishes to advise readers victimized by the looped files that running your speakers through the dishwasher will not wash the ickiness from them, and is generally not advisable.

Rumours of their deaths were greatly exaggerated



It's one thing to be prepared, but it's quite another to be caught with your virtual pants down.

The CNN.com Web site was embarrassed recently when pages containing the obituaries of several still-living public figures who have seen better days were left in a publicly accessible area of the site for all to see.

The pages were also accessible by people searching Google for information on the not-quite deceased parties, who included former US President Ronald Reagan, current US Vice-President Dick Cheney, Pope John Paul II and comedian Bob Hope.

The pages were pulled down within 20 minutes by CNN.com staff, but not before Web site TheSmokingGun.com grabbed copies for archival purposes, after being tipped off by alert readers of the off-beat news site Fark.com.

This is actually the second time around with this sort of screw-up for Bob Hope, who will turn 100 on May 29. In 1998, the Web site of the Associated Press mistakenly posted a pre-fab story with a headline announcing the comedian's death, prompting a US congressman to relay the sad but erroneous news on the floor of the House of Representatives. The story was launched when someone at AP.com pushed the wrong button after the death of Frank Sinatra, exposing a canned obituary for Hope with X's in the place of the still-undetermined date of his death.

For the sake of timely and well-researched news, it's a common practice for newspapers and other news outfits to have obituaries ready for public figures who have fallen on ill health, but in the Age of the Internet, it's important to keep a tight lid on such preparations. ◆

Queens lab creates computers with "manners"

Researchers at Queen's University in Kingston, Ont. are further perpetuating Canada's reputation as a "polite" country by creating a fascinating set of computer devices and software that together employ a sort of "manners," by sensing their user's needs and availability, and responding to them appropriately.

The concept was created by the Human Media Lab (HML) at Queen's, and is known as the Attentive User Interface (AUI). Last month, several members of the nine-man HML team, including its director, Dr. Roel Vertegaal, travelled to Fort Lauderdale, Florida to present their AUI systems at a prestigious conference that discusses human needs as they pertain to computing.

With so many ways for a computer to distract us from what we're doing, this new concept in computing could be a godsend for some busy people, as it senses whether you are at your desk, and whether or not you're embroiled in a demanding task before interrupting you with a notice of new mail, for example, or popping up instant messages and other distractions on your screen.

"We now need computers that sense when we are busy, when we are available for interruption, and know when to wait their turn just as we do in human-to-human interactions," says Dr. Vertegaal at the HML Web site (www.hml.queensu.ca). "We're moving computers from the realm of being merely tools, to being 'sociable' appliances that can recognize and respond to some of the non-verbal cues humans use in group conversation."

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This prize package features Arturia Storm 2.0, a comprehensive and easy to use virtual studio that combines a powerful sequencer with 13 instruments for sound synthesis and sample manipulation. Also included is Edirol's PCR-30 USB Keyboard Controller, complete with 34 individual controllers – 25 fully assignable – and Edirol's UA-20 24-Bit Audio and MIDI USB bus powered interface.

RULES AND REGULATIONS

1. You may submit up to three (3) original compositions. Each composition submitted must be your own original work. Compositions may not exceed five (5) minutes in length. A completed and signed application must accompany each entry. Contestants must submit all entries in MP3 format and burned on a CD. CDs will not be returned. Compositions previously recorded and released will be disqualified. Compositions using samples of previously recorded material will be disqualified unless accompanied by a release waiver from the original artist.

2. This contest is open to amateur unsigned acts. All genres of music will be considered. Employees and families of *Toronto Computes!*, its parent company, subsidiaries and affiliates are not eligible. Contestants must be Canadian citizens or have landed immigrant status.

3. Winners will be chosen by a select panel of judges and will be judged based on melody, composition and lyrics (when applicable). The quality of performance and production will also be considered.

4. The first place winner will have first choice from the prize pool. The second place winner will have the second choice. The third place winner will have the remaining prize.

5. By submitting compositions and the signed entry form to this contest the entrant claims that their composition is original work and he/she holds all rights to the composition. The contestant also agrees to give *Toronto Computes!*, its parent companies and subsidiaries the non-exclusive right to use the compositions for future advertising and publicity purposes without additional compensation for a period of two (2) years from the date of the contest's closing date.

7. All entries must be postmarked by 5 PM EST June 30, 2003. Winners will be chosen by July 15, 2003. Winners will be contacted for their choice of prize. Results will be announced in the August issue of *Toronto Computes!*

8. All decisions of the judges are final.

APPLICATION FORM

Title of entry: .....
Name: .....
Age: .....
Equipment used to record composition: .....
Address: .....
Occupation/School: .....
.....
Postal Code: .....
Signature: .....
E-mail: .....
Phone: .....
Date: .....

www.canadacomputes.com/cooltunes

Send your entries to: Toronto Computes!, Cool Tunes Contest, 625 Church Street, Suite 600, Toronto, ON, M4Y 2G1 Attn: Editor

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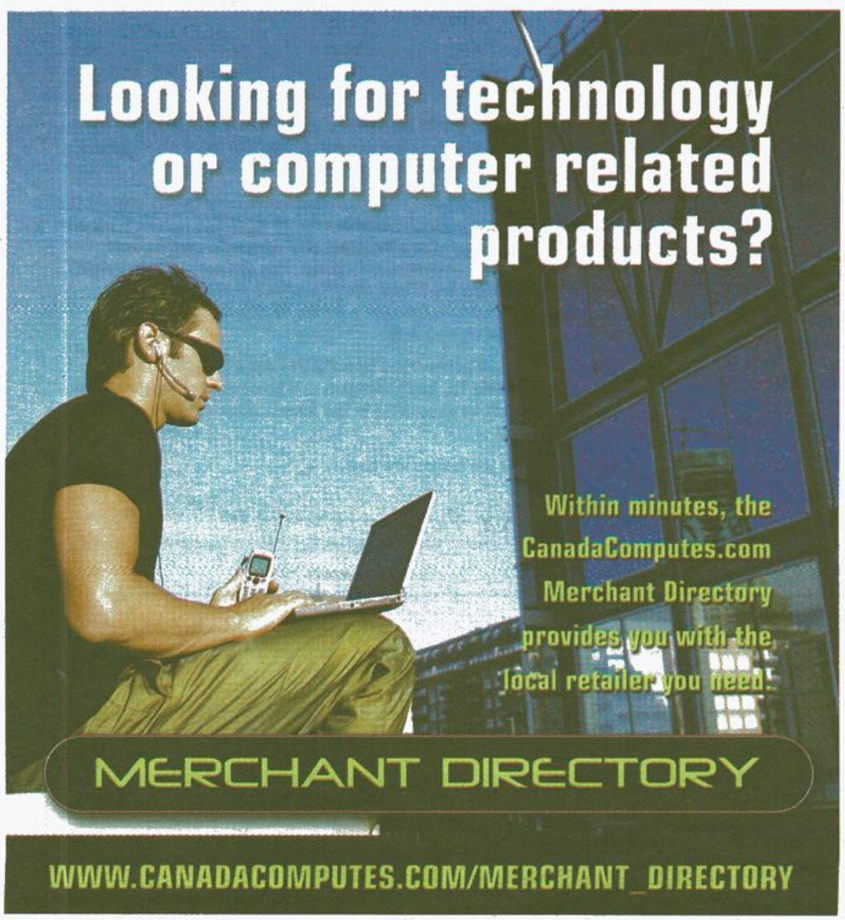
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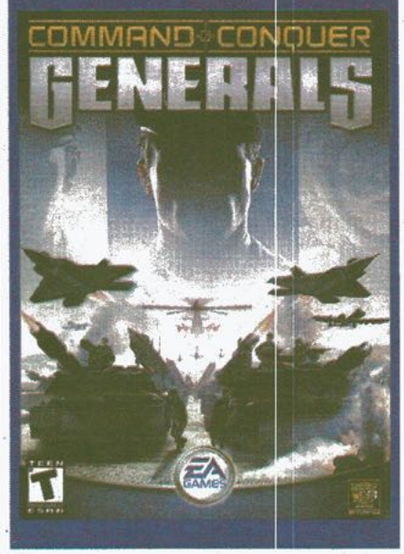
Generals gets into politics



By NESTOR GULA

I was actually looking forward to the new *Command & Conquer* game. *C&C* has always had a good combination of storyline and gameplay. In *Command & Conquer: Generals*, this has been preserved – the gameplay is very cool and much improved (not that there was much wrong with previous versions), and the storyline is interesting, although given the current global political climate, rather disquieting.

There are three forces in this game – the US, the Chinese, and the GLA. It is the last group that is unsettling. The GLA (Global Liberation Army) is by all accounts patterned after liberation groups that existed in the 1970s. However, given that the geographical situation of most of the action here is in the "Stans" (Afghanistan, Kazakhstan, etc.) the GLA can easily become synonymous with a terrorist organization that is being hunted right now. This kind of thing can lead to a lot of misinterpretations – especially with a scene of a minaret being blown up in the lead-up to the first training mission.

Of course the storyline is not that simple – there is a triumvirate of power in this world that is represented by the three combatants. The three have to battle it out in a series of skirmishes for world supremacy. (*Where's the UN, Canadian peacekeepers?–Ed.*) This would be great if the sides were really equal. In *C&C:G*, the US is the top dog militarily and technologically. The Chinese run a distant second, and the GLA barely shows. There are a few skirmishes where the Americans' technological superiority is not a great benefit – a real life example would be that foot soldiers still have to slog it out once in a while – but for the most part, it is easier to win a skirmish playing the US side than it is using the other two combatants. Although the GLA has a unit called Terrorist, you cannot exploit it as a real terrorist – as a strategic weapon that has an unlimited field of operation and is not limited to the field of battle.

The biggest improvement in *C&C:G* is in the graphics. The ones in previous versions were no slouches, but these ones have great 3D views and effects. Zooming in, scrolling through the battlefield and jumping from unit to unit presented no problems, and the graphics were seamless. The computer I used for testing was a Dell Dimension 1.4 GHz machine with settings that were just slightly advanced of the requirements. I had no problems running the game – not bad for a machine that is nearly two years old. The game has higher requirements and is moving into the realm of first-person shooters and other graphically intensive games. The pace of this real-time strategy game is a little quicker than in previous titles – you really need to be on top of your troop management here.

Aside from my misgivings about the politics of this game, it is fun, and I guess that is the point. Were the politics better in *C&C: Red Alert*, with the US pitted against the Soviets? I'm not sure, but the timing was not as raw, I guess. With the upgrade in graphics and gameplay engine, this edition of *C&C* will no doubt be a success. I will be waiting to see who the baddies will be in the next version of this series. ◆

more INFO

Command & Conquer: Generals
$64.99
Electronic Arts Inc.
www.ea.com

Requirements:
Windows 98/98SE/ME/2000/XP (NT/95 not supported); 800 MHz Intel Pentium III or AMD Athlon processor; 128 MB RAM; 8x CD-ROM/DVD-ROM drive; 1.8 GB free hard drive space; 32 MB video card using the Nvidia GeForce2, ATI Radeon 7500 AGP video card, or more recent chipset with DirectX 8.1 compatible driver; DirectX 8.1 compatible 16-bit sound card

PC gaming: What's coming ...

By CHRIS TALBOT

The annual Electronic Entertainment Expo (generally referred to as E3) is only a matter of weeks away, but even before all the madness of the conference and show floor begins, we've already been hearing about a number of prominent releases for later this year.

One series is getting another addition to its line, a popular console title is coming to the PC and Mac realm, and a certain TV show will soon be turned into a home computer game (fans will rejoice and the rest will scoff).

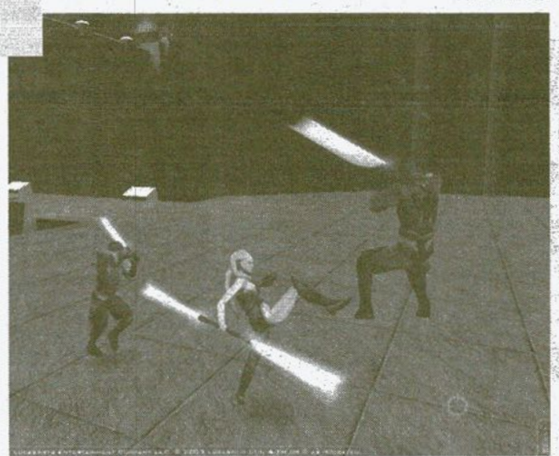
Join up with Master Chief

Xbox owners were more than a little miffed in March when the bad news came out of developer Bungie: The much-anticipated *Halo 2* is being postponed until sometime in 2004 so that the developers can focus their energies on bringing *Halo: Combat Evolved* to PC and Macintosh platforms. While that's terrible news for the console world, as Xbox owners still won't be able to take Master Chief online for some fragging fun, it's excellent news for PC and Mac gamers.

Originally to be released as a computer real-time strategy, *Halo* was transformed into a first-person shooter adventure game for Xbox and has remained on the top of the Xbox sales and rental charts since its debut with the big, green box. Microsoft and Bungie have been talking about the computer version of the game for a long time, and it's finally expected to hit store shelves in September. PC gamers shouldn't expect just a straight port of the Xbox version of the game, but the story will remain intact.

However, there will be a few changes that computer gamers should take note of: First off, the game will be based on the typical mouse-and-keyboard combination found in most computer-based first-person shooter games. More importantly, though, will be the addition of online multiplayer support, something Xbox owners won't have until *Halo 2*. Educated guesses suggest up to 32 players will be able to engage in multiplayer death matches over a LAN or the Internet.

Use the Force, young Jedi



LucasArts is working on the latest instalment of its line of *Star Wars* first-person shooters. *Jedi Knight: Jedi Academy*, the fifth *Star Wars* FPS in the series that started way back when with *Dark Forces*, will put players in the role of a Jedi apprentice at Luke Skywalker's academy (for the non-*Star Wars* fanatic who hasn't read the sequel novels, after *Return of the Jedi*, Skywalker founded a Jedi academy and started re-building the order destroyed by the Emperor and Darth Vader).

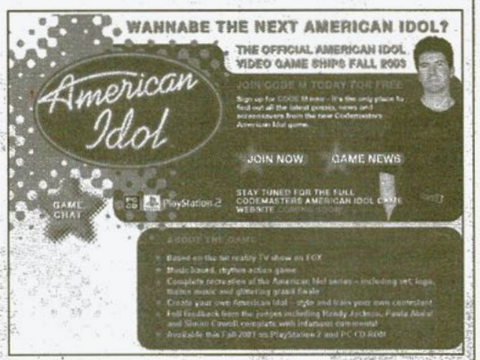
Up until now, the FPS series has followed the adventures of Kyle Katarn, a mercenary-turned-Jedi-turned-mercenary-again, and even though Katarn will be a part of the storyline as one of the new character's instructors at the academy, he will not be the focal point of the plot this time.

Jedi Academy sounds like it will be a *Star Wars* fan's heaven, with the ability to create and customize a Jedi student character and work toward becoming a powerful Jedi (Katarn was a bit of a reluctant Force-wielder). Players will be able to select a species, a gender, clothing, facial features and physical attributes for their characters. They'll also have the ability to choose a lightsaber, with more styles opening up throughout the game (including the double-bladed lightsaber).

Force powers, a variety of weapons and enemies following the Dark Side of the Force are likely to appear in this latest addition to the *Jedi Knight* series. LucasArts is gearing up for an autumn release on PC and Xbox.

Reality TV on PC

Reality TV hasn't exactly translated well to the computer game environment. Just look at the *Survivor* game, which is considered by some reviewers to be one of the worst games made in recent years. Hopefully Codemasters will have better luck with its recently-acquired licence for *American Idol*.



Based on the TV show of the same name, *American Idol* will be a music-based rhythm game in which players compete as singers on the popular television program. Players will create a character, choose their musical style, train said character and then compete. According to the announcement we received from Codemasters, over 40 music tracks will be available to choose from.

Of course, what's a contest without judges? Simon Cowell, Randy Jackson and Paula Abdul will all appear in the game as computer-generated characters. Each will record commentary and dialogue to be used in the game.

Codemasters promises a first look at the game at E3 in May. It's unknown when *American Idol* will be released, but we do know it's being planned for both PC and PlayStation 2. ◆

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COLUMNS

Expansion packs extend the life of games

Can't get enough of your favourite computer games like *Battlefield 1942*, *The Sims*, *Zoo Tycoon* or *EverQuest*?

You're in luck – one of the more popular trends in the PC gaming industry is to offer expansion packs for successful franchises. These value-priced add-ons offer more gameplay to existing titles, adding elements such as new missions, characters and levels.

And they've proved to be a cash cow for game publishers, as it doesn't cost much to develop them (compared to a whole new game and game engine), plus the consumer needs to own the original game in order to play the bonus disc.

The following is a brief look at three upcoming expansion packs.

Warcraft III: The Frozen Throne

Computer game fanatics whose mouse-clicking finger is numb from last year's strategy epic, *Warcraft III: Reign of Chaos*, can get ready for round two.

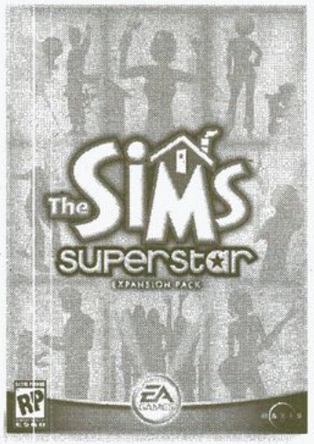
Blizzard Entertainment's *Warcraft III: The Frozen Throne* will be the first official expansion pack to the fastest selling PC game in history. It will introduce a new story, three new "hero" characters and a handful of never-before-seen fighting units like mountain giants and faerie dragons.

The *Frozen Throne* campaign adds a new single-player tale to the original game, where players must return to the war-torn world of Azeroth to face a new threat: An imprisoned Orc King looking to break out of his icy tomb. New multiplayer features are also included.

This value-priced add-on disc will also include the ability for races to build shops and buy items, new graphical tweaks and pre-rendered cut scene movies and an enhanced world editor that will offer players the option to create their own custom campaigns.

Warcraft III: The Frozen Throne should be out sometime in June.

The Sims: Superstar



Think it's easy being a celebrity? You'll soon have the chance to find out, with the sixth expansion pack for the best-selling computer game of all time, *The Sims*.

Electronic Arts' *The Sims: Superstar* will allow players to turn their humble sims into glamorous celebrities by having them pursue careers as Hollywood actors, rock stars or supermodels. The new hub in the game is known as Studio Town, which is home to recording studios, TV networks, movie lots and of course, a spa.

Just like in real life, fame and fortune means a more comfy lifestyle with extra bucks to throw around for expensive art, swanky furniture, a personal butler or a masseuse.

But there's a price to pay for this success – the paparazzi and relentless groupies may prove too big a thorn in your side to last in this biz.

The glamour starts in May.

Neverwinter Nights: Shadows of Undrentide

As if the 80+ hour adventure wasn't long enough, *Neverwinter Nights* players looking for more classic RPG gameplay will find solace in *Shadows of Undrentide*.

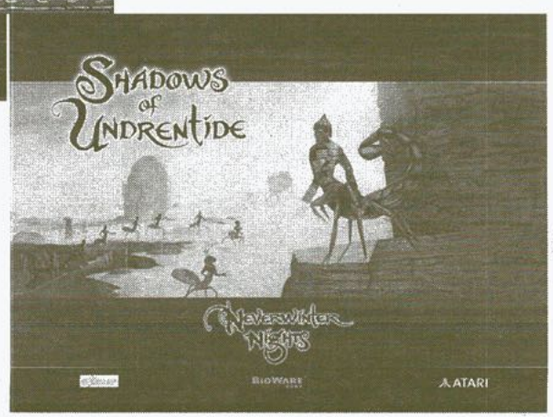
This expansion will include a new 30-hour single-player campaign and a handful of new game features such as additional Dungeons & Dragons skills, feats, classes, monsters, weapons and spells.

The story opens in the town of Hilltop, with the player uncovering a mystery surrounding stolen artifacts.

Shadows of Undrentide also houses three new tile sets and other assets for use in the Aurora Toolset, the free editor that enables players to create their own game modules and swap them online.

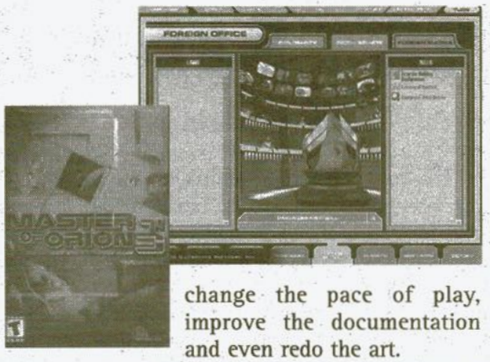
This *Neverwinter Nights* expansion is being co-developed by Edmonton-based BioWare and Floodgate Entertainment, a young company made up of developers from Looking Glass Studios *(Thief, System Shock)*.

The add-on is due out sometime this spring. ◆



Macromanaging the universe

By WILLIAM A. WOOD



Master of Orion 3, the "ultimate space strategy," has ultimately become a source of some controversy.

The latest in a popular turn-based "conquer the galaxy" strategy series, *MoO3* is really a sequel in name only. It became clear early on that the developer (Quicksilver Software) was going to diverge from the series' previous style of play. Some of these changes worried waiting fans, but the company was enthusiastic.

Quicksilver released planning details for an ambitious, grand-scale game that involved running a galactic empire using the same basic *MoO* formula (research technology, colonize planets, develop fleets, conquer your neighbours), but from a different perspective. As the exalted leader, you would be removed from the nitty-gritty of running your empire; instead of having to micromanage your civilization, you would rely on underlings to do much of the dirty work, concentrating instead on macromanaging such things as overall development plans and diplomacy. As well, space combat would no longer require (or allow) you to control individual ships, but rather have you direct task forces (small fleets), which would fight more or less on their own.

Although many of the more ambitious plans were ultimately scaled back, the basic design arrived as promised – sort of.

Learn to love me

The game itself takes some getting used to. While the capacity for micromanagement still exists to some degree, *MoO3* is clearly designed to discourage that, so playing with the old mindset leads to frustration. Taking the game on its own merits, trying to see the "bigger picture," is definitely the way to go.

Unfortunately, I'm not sure just how much fun that is. In many respects, being divorced from the "local" decisions (particularly the ones that were so crucial to *MoO2*, like space combat and specific researching) takes a change of philosophy.

The game's learning curve is almost vertical. There is a lot of data to digest, but the macro connectivity (that is, how players make big decisions and get useful feedback) is often hard to comprehend. *MoO3* came very poorly documented, in both the manual and the in-game help – even the developers admit that. Finding out how to play properly requires gamers to scour the official discussion boards for help, which may be more effort than many are prepared to make.

Luckily, the game's AI is a pushover; apparently, it was nerfed (made easier) shortly before release because the beta-testers couldn't beat the game on the hardest levels. But now, gamers (even those that like it) complain *MoO3* can be beaten with little effort.

For and against

The online community has split into those that were severely disappointed by the game and are giving up on it (noisily) versus those who like the concept and enjoy playing it, but just want it to be patched/polished a bit more. *MoO3* is fairly easy to modify (in some ways), and many gamer-created mods have appeared to change the pace of play, improve the documentation and even redo the art.

But this begs the question: How is it that the gaming community can do more to improve the play balance (and therefore the fun) in weeks than the developers and testers could do in

continued on page 50

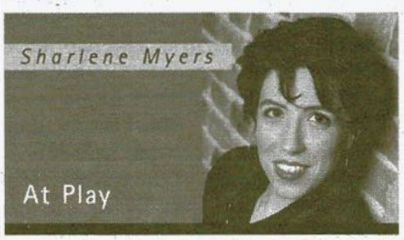
more INFO

Master of Orion 3
$70
Infogrames
moo3.quicksilver.com

ESRB TEEN T

Minimum requirements:
Windows 98/ME/2K/XP, 300 MHz CPU, 128 MB RAM, 800 MB hard-drive space

Things to do during summer vacation



Now that summer's on its way back, I've started dreaming about lazy days at the beach again, building sandcastles like I did as a kid. Well, maybe not sandcastles so much as sand trailer parks, consisting of a row of single sand piles forged from the same mold and with no architectural detail to distinguish them from the ant colony down the road.

Anyway, I'm guessing that many people had this experience, spending hours – well at least kid-brain hours, which are more like, say, 10 minutes long – working on this beachfront property development, dreaming of the people who were going to live there, and all the profits to be made from waterfront redevelopment, and whether to add a boardwalk of Popsicle sticks, and where to get all the Popsicles (probably would need 30 or so), and how to eat all of them fast enough that they wouldn't melt. But during the Popsicle financing negotiations, along comes a bunch of bigger kids playing football, straight through the new development like a tornado, flattening the hours (read: 20 minutes) of work in five seconds, as tornados are apt to do with trailer parks. So it's back to square one, wetting and packing sand, turning it over and removing the mold ever so gently, until it all happens again. It might be the incoming tide this time, or an overtired sibling out for a fight, but the flattening is inevitable.

If you remember that feeling, that flattening, deflating feeling, then you might be able to imagine my distress while playing *Impossible Creatures*.

I'm not the best juggler – the world is much better off if I, and those like me, stick to doing one thing at a time (actually, I'm not great at doing that either, but that's another column). Having played real time strategy games before, with more or less calamitous results, I stepped into this one gingerly, starting with the tutorial.

Tutorials are great for building up your confidence. Having mastered the art of rotating the camera angles by moving the mouse around the screen, moving on to commanding a henchman to shovel coal with nary a complaint, I figured I was on my way to conquering the island.

One of the most engaging components in *IC* is the Army Builder. Basically, players create hybrids of animals, combining two different creatures to make one "Impossible Creature" that merges the strengths and abilities of them both. The idea is to put together a collection of these creatures that will then fight someone else's collection of creatures, either an AI player or another human player over a network.

It's remarkable how agonizing this can be, pouring over the special abilities of each animal, and once they're combined, deciding which of each species' features to incorporate in order to produce the strongest combination. Is it better to combine a Komodo dragon and elephant with the dragon's head or the elephant's head? The dragon's tail has obvious battle uses, but what about the legs and torso?

I assembled what I thought was a pretty strong army of creatures and started a game – just a simple game against the computer. And that's when cold, hard, virtual reality set in.

First of all, having henchmen is great – they're big, strong guys who do all the heavy work at your command with no argument, just "You're the boss." But they're not very bright. When I tell them to build something, they build it, but if I don't notice right away when they're finished, they'll just stand there. You'd think they could look around and see that there was still coal to shovel, but noooo – they're not paid to think. Well, they're not paid at all, but if they were, it wouldn't be to think.

As soon as I had gathered enough resources, I built a creature chamber and started cranking out an army, one creature at a time. The trouble was, every time I managed to build up a pack of creatures, I'd hear the panicked alert from one of the henchmen: "The critters are under attack! Our base is under attack!"

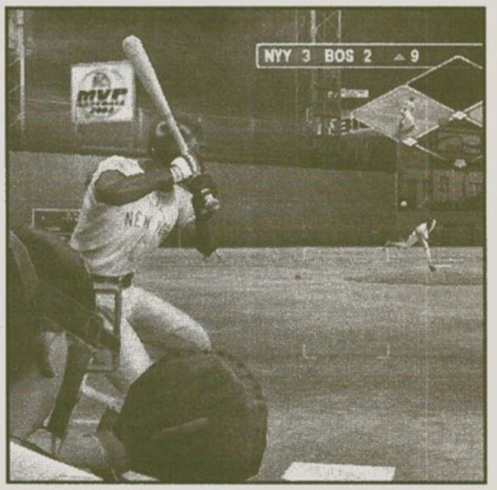
The valiant henchmen would keep on shoveling coal while the creature pack fought to defend the base. And I'll give them credit, they fought off the enemy creatures several times. But in the end, the enemy attacks were relentless and we didn't have enough time to replenish our ranks.

There I was, heartless, distant leader, cranking out clones of these hybrids as fast as I could, while one creature after the other fell and faded away, like they were just expendable assets rather than the carefully considered experiments of a mad scientist. So we were flattened, over and over and over. It wasn't pretty.

Like I said, I've started dreaming about lazy days at the beach again. ◆

EA's Baseball is an MVP

By TED KRITSONIS



The boys of summer return for another season on EA Sports' latest instalment of its baseball franchise, previously called *Triple Play*. Released just before the Major League Baseball (MLB) season was set to begin, this game is as realistic as it gets when it comes to the sights and sounds of the game.

Given the plethora of options that sports games have nowadays, the simplicity around this game is a little surprising. You can easily play this game and be competitive using either a gamepad or the keyboard. A more efficient engine, new player models and a new player interface make it easier and faster to get used to the keyboard controls, which is a definitive difference from previous years.

All the ballparks look gorgeous, regardless of whether you're playing a day or night game. Of course, seeing consistent sell-outs at the Skydome and Olympic Stadium in Montreal is laughable, but it's not surprising that EA did that, considering the league's well-publicized attendance problems in many ballparks.

The graphics, otherwise, are excellent. Watching an outfielder run and dive for a flyball is captivating, because the sound of the crowd's anticipation and reaction, coupled with the sounds on the field, add a strong dimension of realism to the gameplay. But, as always, there are those gameplay issues that can drive you crazy at crucial moments of the game. Case in point: The first baseman dives to field a sharp groundball, but the pitcher takes too long to run to first and catch the ball from said first baseman to back him up and run over the basepad for an out.

For the most part, players do make the right decisions at the right times, but when the game is tied in the late innings a glitch like that can be a crucial turning point. Thankfully, the gameplay gaffes don't seem to happen too often, so they shouldn't impede gamers from enjoying this one.

Picture-in-picture base running is an added feature that greatly strengthens a gamer's control over the baserunners. Now, when you desperately need to try and manufacture a run late in the game to win or tie, assessing the right time to steal a base or bunt for a sacrifice is made a lot easier with this feature.

Going even further, EA included a franchise mode to give gamers the chance to see how good they can be as a general manager. By managing the payroll, scouting up-and-coming talent and drafting players, you can be immersed in the front office just as much as you are on the field. And with the online elements, you can update the current rosters during the course of the actual MLB season.

Online play is a PC exclusive; none of the console versions have it. Network play via LAN and Direct IP connections should get you up and running to challenge ball players everywhere.

The home run derby, which is popular among many, is a great one to play on your own or against another player online. There are certain distances that you have to try and reach for points, so it isn't just about who can hit more homers. But it's not as easy as it sounds, because the timing of the batter's swing plays a huge role, just like in a normal game situation.

At the end of the day, EA has put out a great baseball title that captures the sights and sounds of the game so well, while remaining fairly consistent in its gameplay. With the added features, gamers should notice a greater amount of control, and that makes for a great experience in any sports game. ◆

more INFO

MVP Baseball 2003
$59.95
EA Sports
www.easports.com

EVERYONE E ESRB

Minimum requirements:
500 Mhz or faster Intel Pentium II or AMD Athlon processor; 64 MB or more RAM; 700 MB free hard disk space; 16 MB or greater video card; DirectX 8.1

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Musical Odyssey: Instruments galore

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Violin

The standard way to get a half decent violin sound is to point a dynamic microphone at the centre of the violin, around the bridge. The microphone should be a bit higher than the violin and towards the front of the instrument. It is best to keep the microphone and its stand away from the bow hand, as placing the mike too close will lead to contact between the two.

You can buy inexpensive, stick-on, contact microphones for the violin, which can also be used for mandolin, guitar and a host of other stringed instruments. These produce a relatively tinny sound with a propensity for feedback if you are monitoring what you are recording. However, used in conjunction with one or two regular microphones and mixed well, you can get a very nice tone.

Lately, I've been using a Yamaha Silent Violin borrowed from a friend. This is a great instrument because the sound is passed directly to the mixer, or soundcard, without the need for microphones, and the sound is excellent.

Hand drum

Just like with a drum set, miking a hand drum can be a bit of a challenge. Depending on where you position the microphone, the sound changes.

This can be used to your advantage – if you move the drum while playing the passage, an interesting effect can be made. ◆

Macromanaging the universe

continued from page 49

months?

To their credit, the developers are working on an official patch to fix many of the issues (the too-easy AI, bugs, interface difficulties, etc.), but there is, at the time of writing, no release date – and it's hard to feel grateful when we should expect a game to be finished when it is released for sale. In today's marketplace, that seems increasingly rare, I'm sorry to say.

I was a huge fan of *MoO2*, and some aspects of *MoO3* intrigue me, but ultimately, I did not enjoy the macromanagement experience (at least, not as it exists now). If you want to give this a try, be sure to read the discussion boards first – and wait until the patch comes out. Perhaps your patience will be rewarded. ◆

Robin Hood on the PC

By CHRIS TALBOT

Rob from the rich, give to the poor. Repeat. In a sense, that is the life of history's most notorious legendary character, and Montreal's Strategy First has brought Robin Hood to life on PC in what has been billed as a tactical strategy game.

In truth, *Robin Hood: The Legend of Sherwood* is part tactical strategy game and part role-playing adventure game. From there, the game becomes more strategy-oriented, with Robin (the player) deciding which missions to take on. The goal is to gather enough money to pay the ransom to free King Richard, who has been imprisoned by Duke Leopold. As in the legends, paying the ransom will bring back King Richard, who will fix all of the problems in jolly ol' England his brother Prince John has created.

To do that, players will have to guide Robin and the Merry Men through missions involving simple robbery, infiltrating Nottingham, attacking castles and ambushing wealthy oppressors along the king's roads. Some missions exist to help Robin add to his treasury so he can later pay the ransom, while others further the plot itself.

Graphically, *Robin Hood: The Legend of Sherwood* is good, but not great. The graphics are decent and the in-game character animations are smooth, but the game does look like it's about two years old at times. The sound is actually fairly good, though. A light score plays in the background and the sound effects are well-timed. Voice acting is mediocre however, and the characters usually come off as melodramatic when they're conversing. It doesn't detract from the gameplay, though.

Overall, *Robin Hood: The Legend of Sherwood* is a good interpretation of the legends and a decent game. ◆

more INFO

Robin Hood: The Legend of Sherwood
$69.99
Strategy First
www.strategyfirst.com

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Requirements:
Windows 98/ME/2000/XP, Pentium II 233 MHz processor or better, 64 MB of RAM, 900 MB hard disk space, 4 MB video card, DirectX-compatible soundcard, 4x CD-ROM drive

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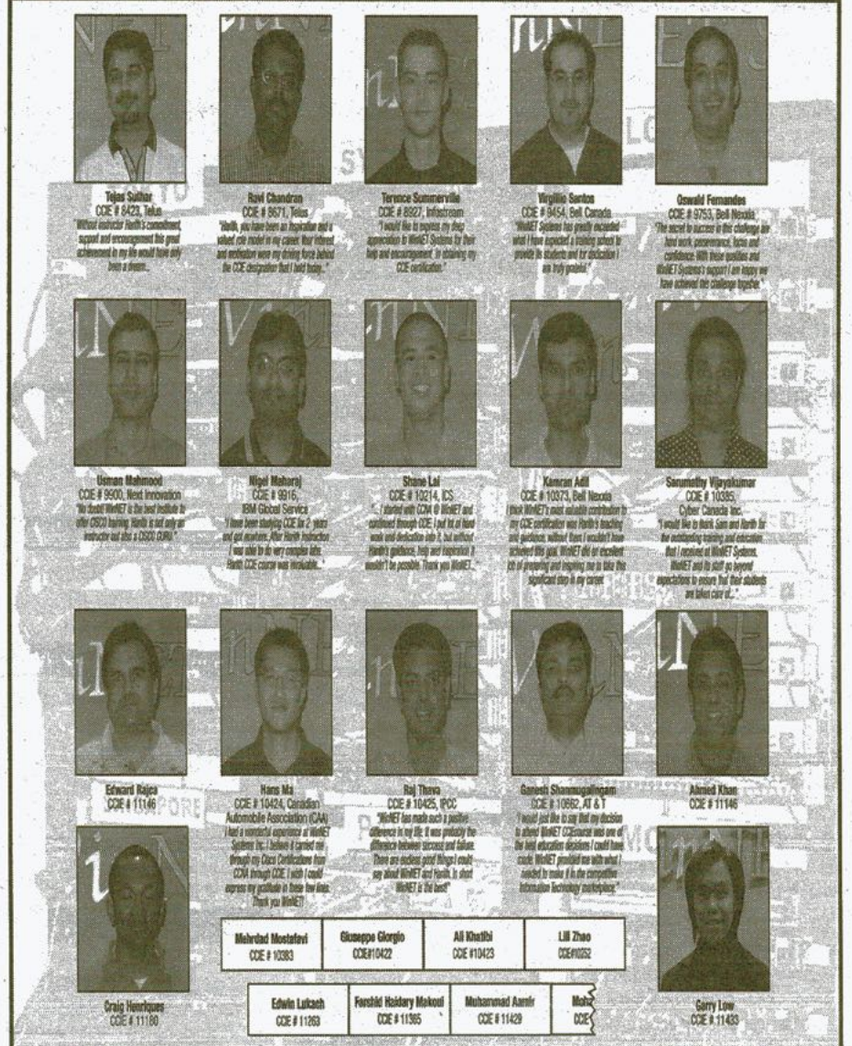

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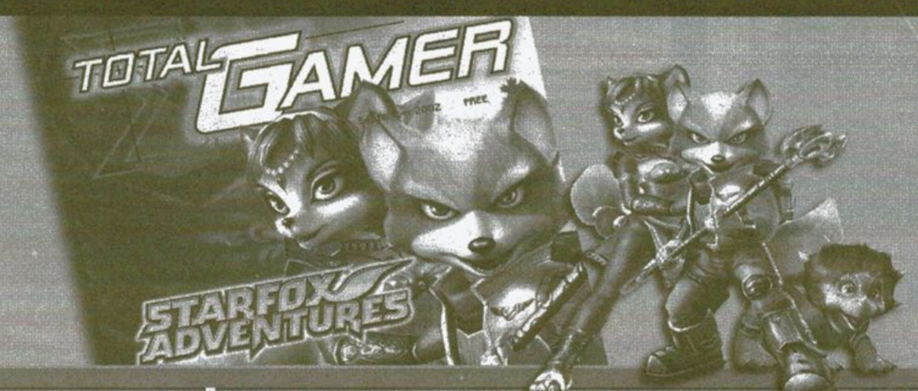

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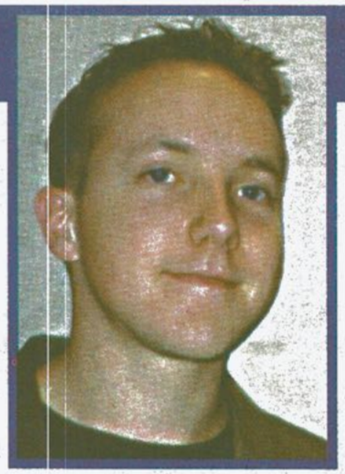


At a small, dark, Queen Street lounge, DJ Twitch, a.k.a. Nick Kopachkov, is the only one not moving to the hard bassline that is pounding out of the speakers and being absorbed by the patrons. He's focused over the pair of Technics 1200 turntables – one hand adjusting the pitch, the other pushing vinyl – and looks up only to smile and mouth a couple of words to a friend who's watching him mix. His lips spell out "watch this," and the previous song is replaced with a new one to excite the AudioWerks Lounge crowd.

DJ Twitch has been playing alongside some of digital music's biggest names since 1995. His big break came in 1997, when he was booked by Hatiras to play at an event for over 10,000 people.

"Hatiras was one of the top promoters in Toronto's erupting scene," he explains. "It was a great opportunity to expose my sound to the masses." Since then, Kopachkov has been one of the biggest names in Toronto's trance music scene at large scale events, as well as many of the city's regular club nights. He's also played several times in the US, and had his own radio show on Global Groove 89.5.

Through his success as a DJ, Kopachkov was able to get another venture started. Digital Love, his favourite type of adoration, as well as the name of his graphic design/event promotion company, began when he started making flyers for rave production companies. "I had all these connections through DJing and all these great ideas," he says. "It just made sense to put them together." He's since designed most of the flyers for many of Toronto's biggest rave production companies.

Who: Nick Kopachkov, El Presidente of digitallove.ca, a.k.a. Nick Kopa, a.k.a. Twitch.

Computer now used: iMac G3, with 40 GB, 384 MB RAM (256+128), with OS 9.1 as my operating system.
Computer first used: Mac PowerPC 6400, 1.5 GB, 96 MB RAM (64+32)

Favourite computer: Mac PowerBook with 17-inch screen.

Other technical gadgetry in use at this time: "Nokia cell, and I'm gonna get a Canon S45 digital camera. I don't think you want to know about my Epson scanner or Epson 820 borderless printer. Do ya?"

Do you use your computer for play? "As the Kool-Aid mascot would say: Oh yeah! But not actual gaming, just recreational stuff like music and Internet."

Best thing about the technology you have: "It allows me to get paid while doing what I love."

Worst thing: "Having to rely on computers isn't always the best, especially when things go wrong, as in when the Internet goes down, my business almost comes to a halt."

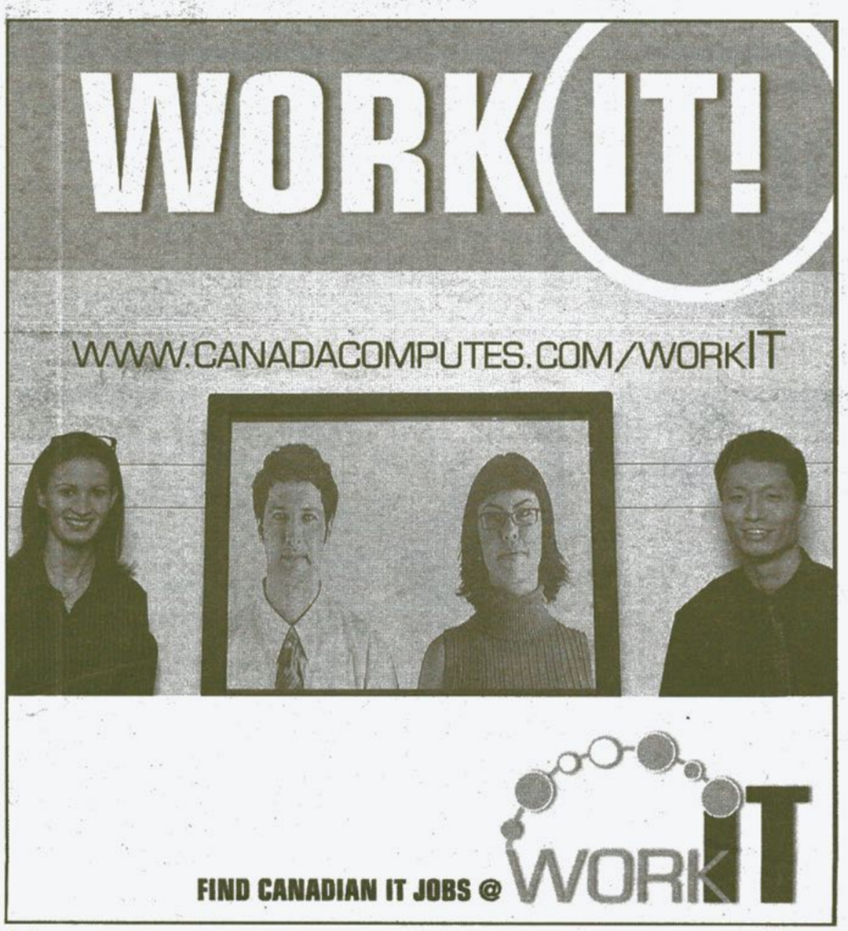
What can't you live without? "It's a given that I couldn't live without *Adobe Photoshop* and *Adobe Illustrator*. The Internet has become such a useful tool, mainly for file transferring and research. It's not like I can't go on, it just means I would then have to trek downtown to deliver files by hand or pay for a courier."

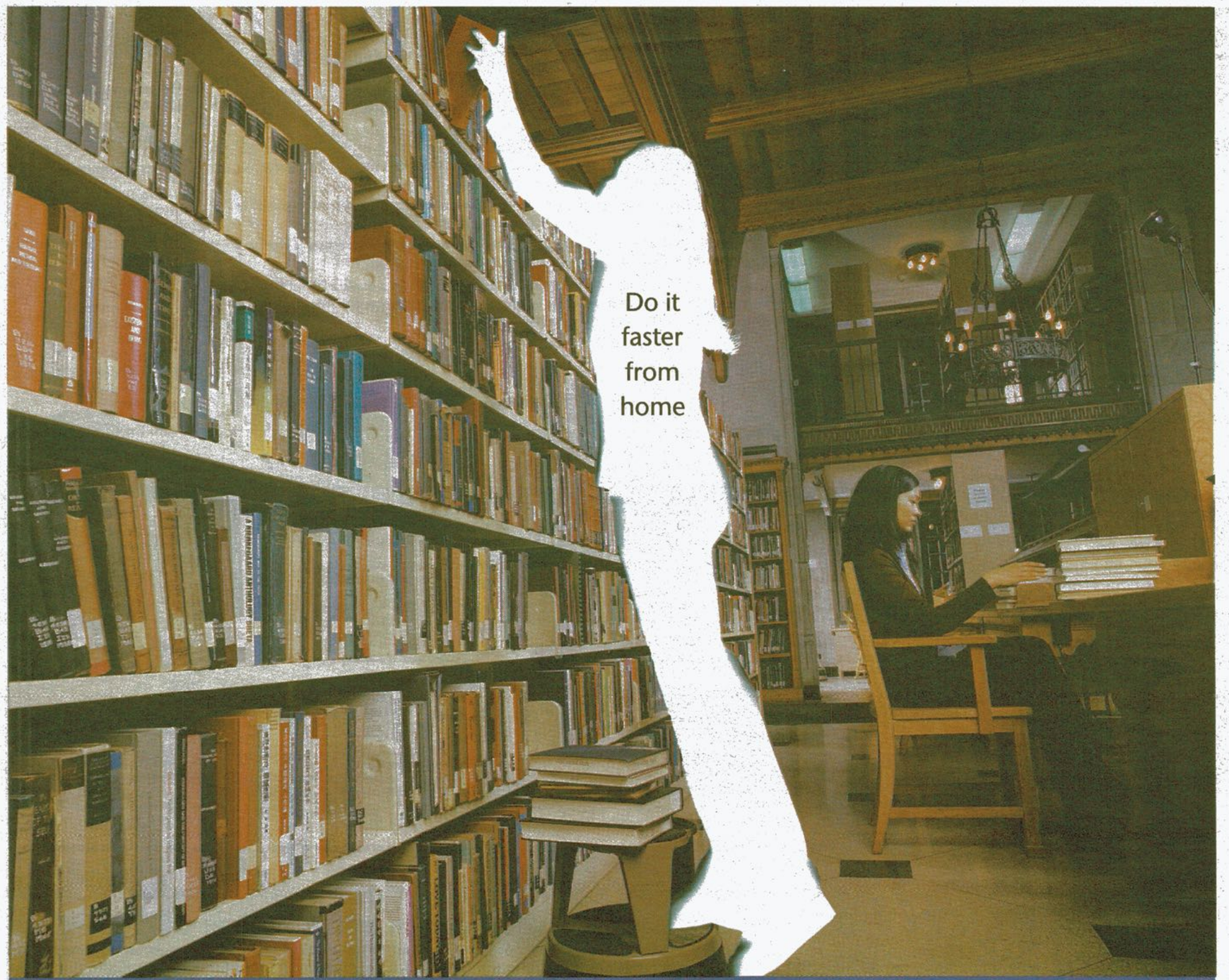
Is there anything you think you need? "Definitely need that digital camera, and a laptop would make my life much easier. Also on the list of things I will get in the near future is a minimum (it's a design thing) 21-inch monitor for the home."

What frustrates you the most about technology? "I don't get frustrated with my Mac, but when I use a PC, pretty much everything is frustrating. I guess the only thing with Macs is their price. It would be nice if they joined the world of PCs in that aspect."

Personal take on issues dealing with technology: "Just leave it be and it will all work itself out." ◆

-interview by Miryana Golubovich





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